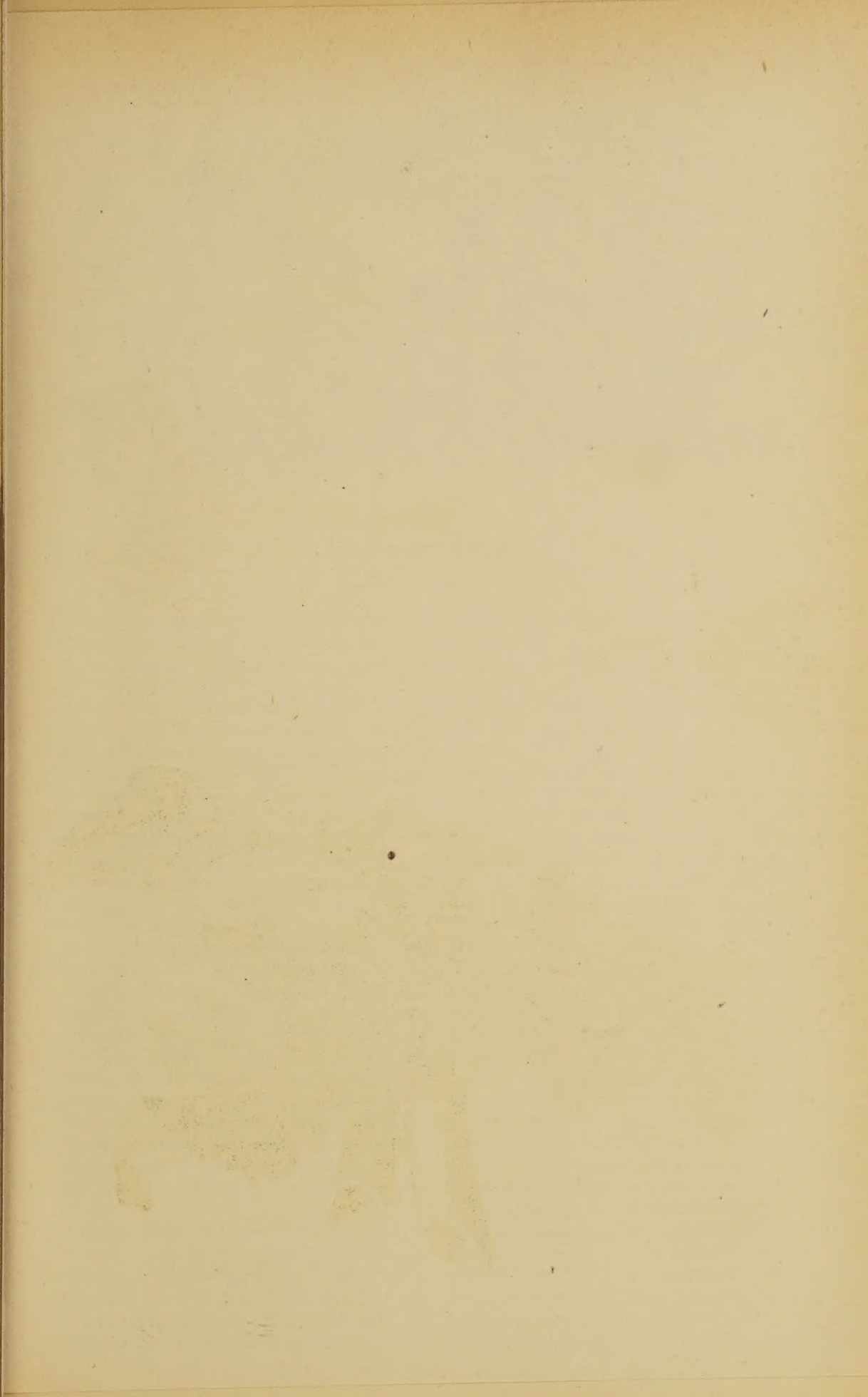


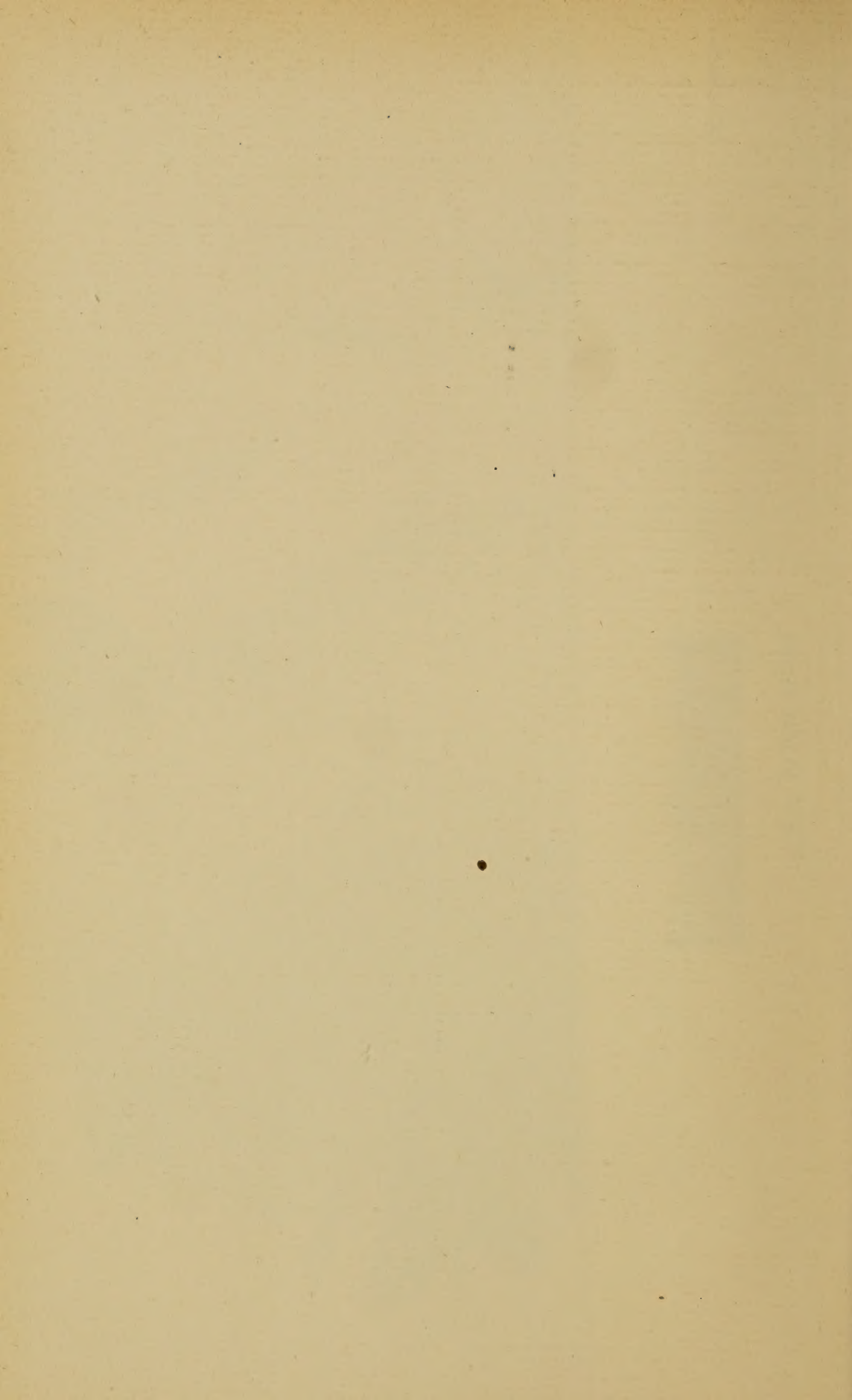
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



CENTRANTHUS.







JUNE, 1885.

RECENTLY planted Rose bushes may be pruned at once. They will not be very rapid in commencing growth, and it is best when they do begin that the wood formed should be permanent. We usually shorten the branches to within four or five eyes from the bottom of each. Plants put in last year, or in former seasons, should be pruned according to their habit. Shy-growing varieties should never be hard pruned, as there is a possibility of crippling them; but robust growers are benefited by a rather severe pruning. Early pruning is a great mistake, as it induces the lower buds to start into growth prematurely, and they frequently suffer for it in being overtaken by frost. Plants which have formed a number of small growths and a few very strong long ones should have the small ones closely cut in, and the strong shoots relied on for a supply of bloom. About six inches of growth, at the most, is sufficient. What we have noted might be described as the short-spur system of pruning, but it is not the only mode of dealing successfully with Roses.

When dwarf bushes form growths in autumn, from five to eight feet in length, it seems a pity to cut them all off at pruning time in spring, and where there are many plants grown we would strongly advise that a number of these growths be

left uncut, and peg them down. They will not, if very strong, bend down to touch the ground, as some may think of trying to root them; but this is not the object, the principle being to bend them over and peg them about a foot or so from the ground, allowing them to remain full length, and every bud along the stem will soon send up a shoot, and these pegged down stems will bloom very profusely. For profuse blooming no plan will equal this, and it is rather surprising that pegging is not oftener practiced. Any one wishing to possess a mass of Roses, growing and blooming in semi-wild confusion, could not do better than peg down the shoots over some beds. To secure very early Rose blooms there is no better plan than not to prune. In many cases now the shoots on unpruned branches of last year, will be a few inches in length, especially near the top; but if those shoots were cut back in pruning all the early growths would be gone, and it would be some time before the lower buds would be so far advanced in growth. For this reason we always allow a few of our earliest bushes to remain unpruned, and they supply us with blooms some weeks in advance of the pruned ones; but as a matter of course, the very early ones are not so fine as the late ones, and would never do for exhibition. The pegged-down shoots gener-

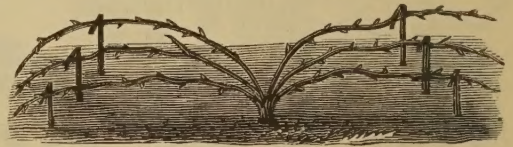
ally bloom earlier than those cut back, and for that reason this mode of culture is not recommended where exhibition blooms are required.

Plants growing in well prepared quarters do not require the roots disturbed annually by digging in large quantities of manure amongst them, but judiciously applied top-dressings are of the utmost advantage. Many think their Roses will degenerate if the whole of the surface near them is not deeply forked or dug, and much natural manure added every spring, but nothing is gained by disturbing the roots very much.

These remarks apply to an extensive collection of Hybrid Perpetuals grown exclusively to supply a large number of blooms, but the treatment of Tea and creeping Roses against walls, and grown in various ways, both in the open and under glass, does not differ much from the above, as regards soil and top-dressings. Pruning is done about the same time, but not so extensively, as our Tea Roses are never hard cut-in, thinning out the small, useless shoots to give more space to the strong ones being the main object in pruning. Very strong shoots formed last year and thoroughly ripened in the autumn will produce much finer blooms than small or intermediate growths, although these generally produce the greatest number of buds. The first blooms of the season on Tea Roses are not, as a rule, so fine as those which follow, and these will have the full benefit of any top-dressings given to the plants now.

The above remarks, by a practical correspondent of the *Journal of Horticulture*, contain so much of sound advice in regard to the pruning and care of Roses, we have thought proper to transfer them to our pages. Those of our readers who are amateurs in gardening will probably appreciate the engraving herewith, that has been prepared to illustrate the method of pegging down that is referred to above. The pegs, in this case, should be at least eighteen inches in length, and are formed of branches of trees of almost any kind, the hook being a short piece of the lower part of a side branch purposely left on, while all others are cut off; pegs of this kind are easily procured, and are much employed in all cases of layering, the length and strength being conformed to the uses to which they are applied.

In regard to a few of the statements of the writer there may be misunderstanding, as they are involved in some obscurity, and these, therefore, will be briefly noticed. "Shy-growing varieties should never be hard pruned, as there is a possibility of crippling them; but ro-



ROSE BUSH PEGGED DOWN.

bust growers are benefited by a rather severe pruning." If these directions are intended to apply to early spring pruning, while the plants are in a dormant state, they are quite wrong, and we cannot think they were so intended, but were, rather, meant for summer pruning, when the plants are in full leaf. Weak or medium growers pruned while dormant are benefited by short pruning, thus allowing but a few branches to grow, while the strong growers can be pruned longer, and thus be allowed to form a greater number of new branches, as they are quite able to. In summer pruning, however, the very reverse is the true practice, as cutting away a part of a plant while in foliage weakens it, and in the case of a light grower this is a detriment, but it will cause a vigorous grower to become more floriferous.

The terms shoots, and branches, are used interchangeably with the writer, and where he recommends no pruning for early blooms, which, by-the-way, is quite correct, and says, "but if these shoots were cut back in pruning all the early growths would be gone," &c., the word "shoots" means the same as "branches" in the previous sentence. Gardeners and others who understand this subject may think this explanation unnecessary, but many amateurs might otherwise be left in a little mist.

As to disturbing the roots by digging in manure, the remarks are quite appropriate, and this ever should be carefully guarded against; not, however, by neglecting annual manuring, which should be unceasingly practiced if the best results are desired; but a good top-dressing laid on in the fall, or even in the spring, can be afterwards lightly forked in without working deep enough to mutilate the roots.

THE DOVE ORCHID.

Few persons interested in flowers have now uncommon where collections of not heard of the Dove Orchid, or, as it is these plants are kept, and its beauty and often called, the Holy Ghost Plant; com- singularity entitle it to the attention it re- paratively few, however, have ever seen ceives. Its name, *Peristeria*, is from



PERISTERIA ELATA.

it, or have ever seen a good engraving of it, such as is here presented. As its fame has gone before it, it is usually made one of the first selections of those attempting the cultivation of Orchids, and it is not *peristera*, a dove, *elata*, winged, in allusion to the central organs of the flower, which have somewhat the appearance of a white dove with purple dotted wings partly expanded, sitting erect in its nest,

with head turned downward as if fondly looking at its young. As the dove is the usual ecclesiastical emblem of the Trinity, this flower has received from the Spanish inhabitants of Central and Tropical America, where it is found, the common name of *Flor del Espíritu Santo*, or Holy Ghost Flower.

The plant, as may be noticed in the illustration, is of a bulbous form, bearing some handsome, sword-shaped leaves at its summit, and sending out its flower stem from its base; the flower stem of a well grown plant will rise to a height of three or four feet, bearing at its upper part for one-third of its length, its handsome flowers, which bloom from below upwards. The flowers are of a yellowish

white, of a waxy appearance, and the parts representing the wings of the dove are dotted with purple, as also, often is the lip. The perfume of the flower is peculiar and is compared to the odor of brandy.

The plant should have a well drained pot of fibrous loam, leaf-mold and sand; it is not adapted, as some Orchids are, to a cool house, and therefore its cultivation should not be attempted among greenhouse plants. It needs a warm, moist house, where the night temperature does not fall much below 70°; during growth it should have a liberal supply of water, but in its resting season it should go quite dry. The blooming season is summer and early autumn.

STRAWBERRIES.

Some very good practical notes on Strawberries are afforded by correspondents of the *Canadian Horticulturist*, in the May number. In regard to hardiness of flower buds, the following, by W. W. HILBORN, of Arkona, Ontario, is appropriate: "I made a thorough examination of the blossoms and buds last spring after the frost of May 29th when we had four degrees of frost. On referring to notes taken at that time, I find that Jersey Queen had not yet opened any bloom, but more than one-half the buds were killed. Primo and Mrs. Garfield were just beginning to open with a very large percentage of the unopened buds killed, while Daniel Boone, James Vick and Manchester, growing by the side of them were uninjured. Crescent Seedling and Captain Jack are also safe ones to plant."

A great deal has been written, last year, for and against a theory that pistillate varieties of Strawberries fertilized by staminate of different kinds bear fruit varying in form to correspond with the forms of the varieties by which they have been fertilized. As very much more on this subject will probably find its way into the press the present season, the following testimony by the same writer from whom we have quoted, should have the weight it is entitled to: "I have had Crescent fertilized with Wilson, Captain Jack, Kentucky, Sharpless, New Dominion, Duncan, Cumberland Triumph, James Vick, Warren, and many others, on different soils, and have watched them very closely

for several years, and find that wherever I plant Crescent I always get Crescent fruit, no matter what they have been fertilized with. * * * I have also tested many other pistillate varieties on a more limited scale, and find the above to hold good with all of them."

Of the value of varieties the same writer says: "The best varieties for both sand and clay loam, so far as I have tested them, are Crescent Seedling, Daniel Boone, Manchester, James Vick and Wilson, with Captain Jack and Mt. Vernon added for clay loam. I always make the most out of late sorts by planting such kinds as Manchester, Captain Jack, Mt. Vernon and James Vick on a moist clay loam, and mulch well with straw. The most of the crop comes into market when prices begin to come up and good fruit getting scarce, hence have no trouble finding good markets." JOHN LITTLE, of Fish Creek, Ontario, writing in the same journal, mentions the following varieties as those he can recommend:

"Crescent—It is by all odds the earliest and best bearer of any of the early varieties. Quality not the best, but, if well grown, would pass for the Wilson any day.

"Captain Jack—If grown in narrow rows and land as it should be for the Strawberry, will please the grower every time. If the grower has no other staminate variety that blooms earlier than the Captain Jack, it will do to plant beside the Crescent.

"Windsor Chief—It is a good bearer and good color, and well flavored.

"James Vick—Will do to plant beside the Chief. Immense bearer. The plant will take care of itself.

"Manchester—A pistillate, and if well fertilized, will astonish the grower with the size of berry and amount of fruit.

"Phipps—Will do to fertilize the Manchester. Wants plenty of room; it makes large stools, often a dozen or more fruit stems.

"Glendale—Late, plenty of fruit. Plant will take care of itself.

"Cumberland Triumph—No better shipper than the Manchester, yet I admire it, it is such a noble berry, and perfect shape, and plenty of them.

"Sucker State—Good grower and bearer. One of the safest to plant.

"These ought to be in every collection."

At the late meeting of the Western New York Horticultural Society, an ex-

pression of experience for the past year was called for, with new varieties of fruits. In regard to Strawberries, Mr. GEEEN recommended the *Parmelia* Strawberry. James Vick proved most productive of any he ever grew. It bears double crop and must be fed accordingly. Mr. ELLWANGER said it had proved very unsatisfactory with him. Mr. HOOKER—Did not do well with him; too many small berries. Manchester produced a fine crop. Dr. VANDUSEN has had Manchester in bearing three years; good crops, but too soft. Mr. GREEN—Manchester is a good berry; a little subject to leaf blight. The *Crescent* is a great acquisition.

June of last year, as will be remembered, was on some accounts an unfavorable season in many localities for testing new varieties, and it is to be hoped that the present month will enable us to come to a better knowledge of some of the newer Strawberries.

CENTRANTHUS.

We miss the beauty and the best effects of very many of the annuals cultivated for their flowers in our gardens, for the reason that the plants are often set singly when they should be in masses, and should display sheets of color instead of the few flowers or heads of bloom that are frequently seen. There is very much to be learned in this respect by the ordinary gardener, amateur, or otherwise. Many flowers that are comparatively insignificant in themselves, have no mean importance when raised in masses. Such a plant is the *Centranthus*, a low-growing annual, with small flowers, borne numerous in large heads. When planted so as to spread over a few square yards in extent the appearance in full bloom is very fine. The pink and white varieties of *C. macrosiphon*, as shown in the colored plate of this month, are the best, though there are several other varieties of this species. The *Centranthus* is easily raised by sowing seeds of it in well prepared soil in spring, and allowing the plants to remain undisturbed, only thinning out as may be deemed proper. Attention must be given to weeding and hoeing, or stirring the soil about the young plants until they take full possession of the space allotted them. This

plant is a native of central Spain, and has been brought under garden culture only for a little more than thirty years, and probably to most persons in this country it is yet a stranger. A small plot of ground given up to this plant in both varieties, with a mass of blue *Lupins* adjoining for contrast, will not fail to produce a most pleasing effect.

We all know how valuable for massing in the same manner are the *Petunia*, the *Phlox*, the *Portulaca* and the *Verbena*; and there are other annuals which may be employed very effectively in this way, though their use is not common. All the *Marigolds* are fine, if so used; *Tagetes signata pumila* is especially desirable. The dwarf varieties of *Scabious* make a better display this way than any other. *Bartonia aurea* and *Eschscholtzia* should always be grown in masses. We may also mention *Abronia*, *Agrostemma*, *Brachycome*, *Calliopsis*, *Leptosiphon* and *Salpiglossis*. Many perennial plants are best raised in masses, but especially so the *Sedums*; the annual, *Sedum cœruleum*, is fine for contrasting its blue with the colors of other species. The art of arranging flowering plants in relation to each other can be so practiced as to add greatly to the beauty of the garden.

THE PEPPER ROOT.

One of the pretty, early spring flowers is the Pepper Root, or Toothwort, an illustration of which is here given, bearing the scientific name, *Dentaria laciniata*. In this region it appears in April or May, according to the season, and is found in thin woods or on their borders, and especially along the rich banks of brooks and small streams. It is a perennial plant with two or more fleshy root stocks, or tubers, connected together; these are white, and so shaped that they easily suggest the idea of teeth, whence the name, Toothwort, by which the plant is frequently known. Like other members of the Cruciferae, or Mustard family, the leaves, and especially the fleshy root stocks have a pungent taste, thus justifying its well known name of Pepper Root. Our figure shows the plant about the natural size, though not unfrequently the plants reach nearly a foot in height. A simple stem arises from the root stock, and this is leafless below, but near the top has a whorl of three leaves, which are deeply three-parted and irregularly cut or toothed on their margins. The stem terminates in a short raceme of white or pale purple, or pinkish flowers. This interesting plant may be easily transplanted, and set in a rich border among shrubs it will afford a supply of pretty flowers at a season when they would be very desirable. Five species of *Dentaria* are described by GRAY as found in the northern part of this country, but he makes the significant remark that "all these species, except the first, (*D. diphylla*,) run together." Some good observers who have carefully noted this plant are of the opinion that all the five species are really but one, their peculiarities being dependent upon the conditions under which they exist.

It is a great delight, and, if one is not acquainted with them, a surprise, to find these flowers in spring soon after the advent of mild weather, and while trees and shrubs are yet leafless. Those who have never hunted the wild flowers of early spring have missed a pure and peaceful pleasure that is one of the charms of rural life.

"It is very strange that our pulses thrill
At the sight of a voiceless thing,
And our hearts yearn so with tenderness
In the beautiful time of spring."



DENTARIA LACINIATA.

CORRESPONDENCE.

VILLAGE IMPROVEMENTS—PRIZE ESSAY.

What agencies and methods can the residents of villages employ to secure the practical effects of the most advanced ideas of sanitation and the proper horticultural embellishment of streets and grounds?

When families live remote from each other, as farmers do, they may be more independent, but when they congregate in villages there should always be municipal government with powers, among other things, to promote the beautiful and to remove everything calculated to injure the health of the people. For municipal officers, good and wise men should be selected independently of party lines.

On private lots the largest liberty, consistent with the health and happiness of others, should be allowed. But the streets, alleys, public buildings and general healthfulness of the place should be delegated to the village authorities.

The most advanced ideas of sanitation require good drainage throughout every part of the village, not only of surface water, but also of all stagnant water beneath and near the surface. They also require pure water for drinking and culinary purposes. They require freedom from the offensive odors and noxious gases that arise from putrid decaying animal and vegetable substances. They require dry and well ventilated cellars. They require that the streets and grounds should have proper proportions of sunshine and shade.

Proper drainage is most thoroughly secured by cutting down the streets from eighteen inches to three feet or more. As the soil is plowed or loosened, those owning low lots will be glad to carry it away for filling and bringing such lots to a level with others. Thus, the public expense becomes small, and the owners of lots are accommodated. The streets should be left higher in the center and the water carried off along the borders next the sidewalk. The sidewalk should also be cut down, but not lower than the

central part of the street. The grade should be sufficient to secure rapid and perfect drainage.

Dwelling houses should be built upon stone foundations and stand high enough that the cellar may be drained, if necessary, into the street.

The alleys running back of the lots should also be cut down, but not more than half as low as the streets, and so graded as to drain freely to the streets. All this drainage should have ample and free outlet beyond the village limits. Most villages are naturally so situated as to admit of this thorough surface or open drainage, and those not so should have a proper outlet secured, even at much expense. Farmers and gardeners near the village should be encouraged to drain all their low or level grounds with tile, as unhealthy effluvia or miasma may be borne in the air to considerable distances before losing its virus.

Last fall, I visited a small village in Indiana, where I had resided some fifteen years before. Meeting, upon the street, two physicians, old residents, I inquired how they were getting on. "Ah," said one of them, "the tile business has ruined this place for doctors. The farmers have found that good underground drainage ensures so much better and more certain crops that they have fairly riddled the country with tile, and the result is, we have not one case of ague or miasmatic fever now where we had twenty when you lived here." The other physician said he could testify that the statement was entirely correct and not overdrawn. This corresponds with the testimony of many others, and speaks volumes for the sanitary advantages of underdraining.

To secure good pure water for drinking and culinary purposes, cities may have expensive waterworks, but villages of from five hundred to ten thousand inhabitants can seldom afford so great expense; they must rely upon wells, usually from twelve to fifty feet deep. That the water in these wells may be kept pure

and sweet it is evident that no filth or organic matter should be allowed to enter and contaminate it. Liquids that filter through the soil soon become purified, but where an opening is made so that a stream passes but little purification can take place. The roots of trees seeking moisture often find the well several rods distant, and in another direction the privy vault. When these roots decay a direct communication is made between them. Worms and insects, also, frequently fill the soil with pores. A stratum of sand or gravel may, and often does, connect wells and cess-pools all over the village. Pure water in the village wells requires that no privy vault be allowed below the surface of the ground. The importance of this point is so great that laws should be made and enforced prohibiting the sinking of any such vault. Privies should be placed upon the alleys, and so arranged that ashes or dry earth may be frequently thrown in to deodorize and disinfect them, and that the contents may be frequently and regularly carried beyond the village limits.

That these ends may be attained with as little expense as possible, all privies should be furnished with boxes or chests of the same size and pattern, easily removed to a wagon or dray in the alley. They should also be so planned as to give room for, and be furnished with, a chest of dry earth, which should be kept filled. The seat should have hinges at the back that it may be opened up for the frequent introduction of dry earth.

The village authorities should see that the full chests are regularly carried away and empty ones put in their places, and also that the dry earth chests are replenished. Waste and slops from the kitchen and manure from the stable, should be placed handy to the alley, frequently mixed with lime, ashes or earth, and regularly carried away by the village authorities.

Now, all this may appear, at first thought, to be attended with considerable expense; but a manure manufactory beyond the village limits, where all this waste is stored and protected from the weather, would doubtless soon yield profits far exceeding all expense. After being once introduced and its workings understood, business men would probably be found anxious to obtain the privi-

lege of removing all filth from the village for the profitable manufacture of fertilizers.

When the streets are graded, a space should be left along the sidewalk and next the street for the planting of trees. This should have plenty of good surface earth sufficiently enriched for the rapid growth of trees. The trees should be planted by the village authorities in straight rows, leaving ample room for sidewalks of good width, and they should be attended by the authorities afterwards. All planting, replanting and pruning should be done with an eye to symmetry and proper admixture of sunshine and shade. Citizens should be careful in planting trees and ornamenting their grounds not to introduce too much shade; plenty of sunshine being absolutely necessary to good health. For the streets hardwood trees will be found the best. Sugar Maple and Norway Maple are excellent for all northern climates.

Parks in small villages should be situated for convenience, or, if possible, to command beautiful or grand scenery, and be made pleasant and attractive as places of resort. No cemetery should be allowed within three miles of the village. Streams of water passing through or near the village should be kept pure and sweet. No slaughter house should be permitted to be so situated as possibly to contaminate the water. Dead animals should be far removed from streams of water for burial. Beer and liquor saloons should be prohibited.

All public or private school houses, halls, churches, or other places for congregations should be inspected by the authorities, who should require provision for ample ventilation.

By common consent business places and public or private entertainments, should be closed at or before ten o'clock in the evening; this is important. The health of our young people especially requires that they should have plenty of good sound sleep, and in our villages the majority of the community consist of laborers, mechanics, or persons in business, that require early rising. A few successive nights of excitement and loss of sleep often lay the foundation for nervous diseases and general ill health.

Now, all these things are believed to be absolutely necessary to secure the practical effects of the most advanced ideas

of sanitation; and, moreover, they are eminently practical. In the course of a few years the little extra expense would surely be repaid both in health and wealth. The clean, healthful, beautiful

village would attract the best classes of citizens and promote its prosperity more than much larger sums frequently spent in other directions.—D. H. ROBERTS, *Owatonna, Minn.*

NARDOO.

Herewith are a few seeds which will hardly present themselves to your notice with any amount of interest unless accompanied with a few words of explanation of the character of the plant which produces them. I believe it is of the Dodder grass character, and its native locality is the very center of the great

dier, but entirely unfitted in point of mental balance, coolness and resource for such a post of responsibility. Having reached about the center of the continent, Cooper's Creek, BURKE, with characteristic intrepidity and impulsiveness, determined to take a small party, four men, three horses and one camel, and make a "dash" for the northern coast line, the main body to await his return. His brave but reckless party made the northern water, probably somewhere on the Gulf of Carpentaria, and, barely waiting to satisfy themselves of that fact, turned round and helter-skeltered for Cooper's Creek in a stampede, which brought them to the camp with the loss of one man and their horses. BURKE, WILLS and KING, with one camel only, reaching the depot to find that the main party, BURKE being behind his estimated time, had started that afternoon for home, leaving a *cache* of stores buried.



MARSILIA MACROPUS—NARDOO.

Australian continent; its history, which will ever associate it with the early pioneer exploration of this country, is briefly told, as follows:

Almost since our earliest occupation of the land we have been anxious to explore the interior, our present holding for beneficial purposes being pretty much on the sea margin. About twenty-four years since, after many smaller prospecting tours toward the interior, from one of which LEICHARDT and his party never returned, it was determined to organize a party to cross the continent from South Melbourne, Victoria, to the northern seaboard, and a very efficiently equipped expedition started under the leadership of one O'HARA BURKE, a gallant fellow enough as a police officer or horse sol-

Here more misfortunes occurred; whether a return to "the fleshpots of Egypt" induced a little conviviality, or from other causes which will now never be known, all three men being dead, the mia-mia or camp, a mere breakwind of bushes, caught fire in the night and destroyed even the small stock of supplies which had been left them, and they stood alone in the very heart of the great continent with nothing but their own resources. They killed their old friend, the camel, and "jerked" a small portion of his flesh, and wanting in anything like decided action, they vacillated between one course and another, fell into inaction and died in detail, although the aboriginals live comfortably in the same region.

And right here the "Nardoo" comes

prominently forward; the poor creatures instead of using their intelligence in catching fish, as the natives did, busied themselves, day by day, picking this barely nutritious little seed, a game which, practically, was not worth the candle, as after all their labor in collecting, bruising and cooking, it gave but a grudging return in a small cake of a heavy, viscous matter with only a very small per centage of starchy matter. BURKE, and WILLS, his second in command, succumbed, and KING, the survivor, was protected and fed by the natives until rescued by one of the relief parties sent out to find them, only to be brought home, feted and taken every care of for a year or two, and then follow his companions to the shades.

There is a moral attached to this sad story: Put the right man in the right

place, avoid precipitancy, and never despair. Had the poor fellows who tried to keep life together by eating "Nardoo," observed the above rules, they might still have been of the present. A line of telegraph now spans the country, and a populous town has sprung up where they perished.—S. W. V., *Melbourne, Australia.*

* A number of years ago a writer in *The Garden* remarked as follows, of this plant: "This very singular plant is a native of marshy places in many parts of Australia, and is highly interesting on account of its fruits being the only food which could be obtained by the traveler and explorer, BURKE and his comrades, and which prolonged their lives. The leaves terminating the slender stalks are arranged in a cross-like manner, and both the leaf and stalk are covered with a short silky down. The Pea-like fruits are produced at the base of the leaves, rather plentifully towards the end of summer."

Marsilia is a genus of Cryptogrammic plants, and is represented by six species in this country.—EDITOR.

SOME GOOD PLANTS.

Two years ago, I procured a *Begonia rubra*; it was a wee bit of a plant when I received it, and it remained in that condition for so long a time that I began to think it always intended to. Coax it as I might it wouldn't grow; it just stood still. I know, now, that it was getting ready for grand work by and by, but I felt quite discouraged about it then, and was half inclined, when fall came and I saw that it was really no larger than it was the day I received it, to throw it away and pronounce it a failure, or a fraud. But the few leaves it had on its short, scraggy little stalk looked so fresh and green that I took pity on it, and brought it in from the veranda along with the other plants. I put it in an out-of-the-way corner, and let it stand there for perhaps two months, with no attention beyond that of giving it a drink of water occasionally. One day, in moving some of my plants, I discovered that a new shoot had made its appearance above the surface of the soil, close beside the scraggy stalk, and it was so plump and "fat" in appearance that it resembled a stalk of *Asparagus*. After that I watched the plant with great interest, and I soon began to see that it had not been idle all summer. The new shoot grew very rapidly. In less than a month it was over two feet high. Then it began to branch, and before long it showed buds at the tips of the branches, which were covered with large

rich leaves of a beautiful green. The foliage was attractive enough in itself to make the plant very satisfactory and well worth growing, but it was magnificent when the clusters of flowers were developed. The bright coral-red blooms, borne on stalks of the same color, formed a most delightful and striking contrast with the foliage. The plant received more admiration from visitors than any other one in my conservatory that winter. It kept growing and blooming, and from that time to this it has never been without flowers on every branch. For a year and a half it has been in constant bloom, and has never shown any tendency or desire to rest. Several times over forty clusters of flowers were counted on it at one time, and each cluster was made up of dozens of individual flowers. The flower-stems are produced at the axil of each leaf. They are long, drooping and much branched, each little branch or sub-division of the stem bearing several flowers. The general effect of the flower clusters is much like that produced by *Euphorbia Jacquiniflora*, though on a much larger scale. It is seldom that we get a plant in which the attractiveness of flower and foliage is so evenly balanced as in this instance. At intervals during the past year, new shoots have been thrown up from the roots of the plant. There are now three stout stalks standing four feet high, each

branching freely. On account of the weight of the branches, heavily laden with their many thick, large leaves, it is necessary to tie them securely to some support, which should be stout. Mine is made of rod iron, having fork-like prongs to thrust into the soil. Holes are punched through this rod its entire length, and a stout wire is wound out and in among them, to which the branches are fastened. This support is better than a trellis, for it becomes an easy matter to train the plant in a natural manner, as the wires project in all directions from the center, and the flat appearance of trellis training is avoided. The wires are not seen among the foliage, and the plant does not seem to be supported in any way, as the rod in the center is painted green, and is, therefore, unobtrusive. The branches, especially when young, are very brittle, and the plant is easily broken if it is not properly tied up.

I have given this *Begonia* precisely the same treatment that I give the Rose Geranium, or any other plant which I grow for foliage. It seems to be willing to grow right along, and as the flowers are produced on new growth, it is, therefore, desirable to keep up the formation of new branches. I should have given my plant a resting spell if it had evinced any desire for one, but, as I have said, it has never done so. I have not forced it in the least, as no fertilizer has been used on it. One would naturally think that a plant that had been in constant bloom for nearly or quite a year and a half would begin to show signs of exhaustion, but my plant does not. On the contrary, it is in most vigorous health. It has been given a soil composed of equal parts of garden loam, leaf-mold,

well-rotted manure and a liberal addition of sharp sand, and of this soil it has had a generous supply, for I have kept the plant in a large pot, shifting it from time to time as it increased in size. At present it fills a tub nearly eighteen inches across. Several new shoots are breaking through the soil, and I think it intends to bloom right on for all time to come. I have never before had a plant that could so truly be called a "perpetual" bloomer.

One of the best plants I received last season was *Impatiens Sultani*. It was in bloom when it came, and has never been without flowers since. The bright color of the flowers contrasts charmingly with the shining foliage. It is a cheerful little plant, and can be made very useful in the window garden, where a good show of bright color is desired.

Another very satisfactory plant is the Paris Daisy, catalogued as *Chrysanthemum frutescens*. It has a great profusion of finely cut foliage, which can be made extremely useful in small bouquets. The flowers are white, a ray of narrow petals about a yellow disc. It is exactly like the old field Daisy, with one exception, it being a trifle larger. It proved to be a good winter bloomer with me. Since spring opened it has been completely covered with its modest, pretty flowers. One thing that recommends it is the fact that no insects infest it. I have seldom had a plant that I liked better. Those who want bright colors and double flowers will probably not like it, but any one who loves the Daisy will be certain to be pleased with it. It is really more beautiful than are most more fashionable plants. For bouquet use it is very pleasing, its neat flowers helping to bring out the beauty of other colors with fine effect.—R. F. D.

THE CHINESE ROSE WINTER RADISH.

Radishes seem to be associated in the mind with visions of spring and summer, as during these seasons they are always to be found upon our tables with the various other products of the garden. Many who eat the crisp and tender summer Radish would be surprised if you were to tell them that Radishes very like our best summer varieties can be had during the long winter, when any vegetables are so eagerly sought after. I must plead

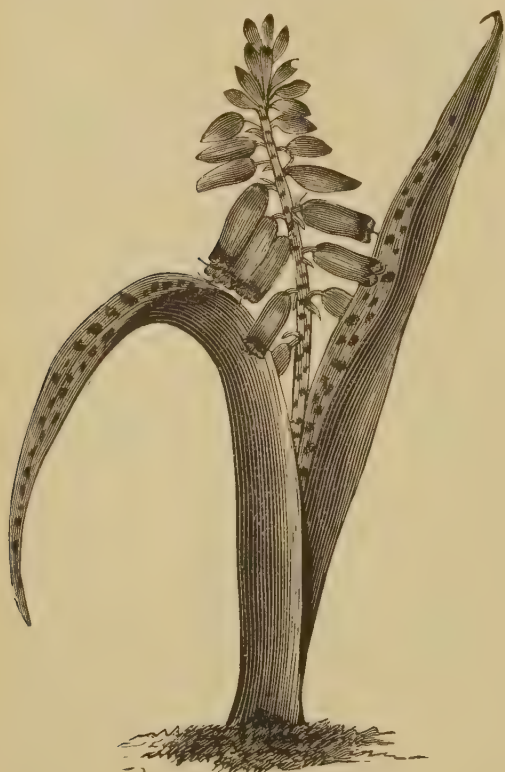
guilty to a profound ignorance on the subject myself until last season, when I procured some seed of the Chinese Rose Winter Radish, and sowed them too thick and too late, for an ordinary season, perhaps, in our garden, where the soil rests on a good substantial clay foundation, without the accessory of under-drainage. Notwithstanding all drawbacks, as the autumn proved to be very warm, quite a percentage of my plants

formed roots, something like the Rose Olive Shaped summer Radish in color and form, but some of them were superior in regard to size. We found that in addition to their attractive appearance they possessed the recommendation of being very tender and crisp, in fact, they seemed to have the consistency of the delicious and tempting summer Radish, instead of the Turnip-like solidity and cadaverous color of the winter Radishes which I had hitherto encountered. After devouring a liberal quantity of them the remainder was dug up late in the fall, and those which had attained sufficient size were carried into the cellar. Here I saw a fine opportunity for exercising the beautiful talent for half doing things, which is one of my leading characteristics, so they were unceremoniously

thrown in a heap on the cement floor of the cellar, instead of packing them in dry earth or sand, as I should have done. The unfortunate roots, however, seemed determined to return good for evil, so in spite of their cavalier treatment the center of that heap, of course some of the outside ones dried up, has produced some of the most tempting looking Radishes I have ever seen. We have eaten some of them this month, March, which looked about as plump as they would if just dug out of the garden. What the Chinese Rose Winter Radish would be if planted at a proper time in a suitable soil and packed as they should be for winter keeping, I do not know, but think the possibilities are considerable, as I can vouch for their excellence under the most atrocious treatment.—X. Y. Z.

LACHENALIA PENDULA.

In May, 1884, I had sent to me a box of seeds and bulbs from a friend in France, whose home is in the shadows of the Pyrenees. I only succeeded with one



small, coated bulb, *Lachenalia pendula*. There was one single green leaf on the bulb, an inch in length, when I received it. I placed it in a four-inch common plant pot, and it remained in that state till the first of October, the pale green

leaf withering away in a few days after I buried the bulb. During the month of October two leaves grew to a height of five inches, their color a pale, uniform green; in November, small reddish-brown spots appeared on the leaves, which were growing rapidly, the spots very much resembling those on the leaves of the common Adder Tongue, *Erythronium Americanum*. The first of December, the leaves were about a foot in length, and between them the blossom stalk was visible, which grew rapidly for a few days, and the buds, which were cream color, began to turn rosy. I gave it plenty of fresh air, warm water and sunshine. It remained in bloom nearly four weeks, had no fragrance, and the uppermost buds did not blossom well. The blossoms were some of them slightly contracted at the mouth; picking them open, they were found to be rosy-purple streaked with bright green in the inside, reminding one of a small Fuchsia; as the blossoms dried away they turned pale purple and were semi-transparent, all remaining on the stock. The spots gradually disappeared from the leaves, which are now bright clear green as they were in October.

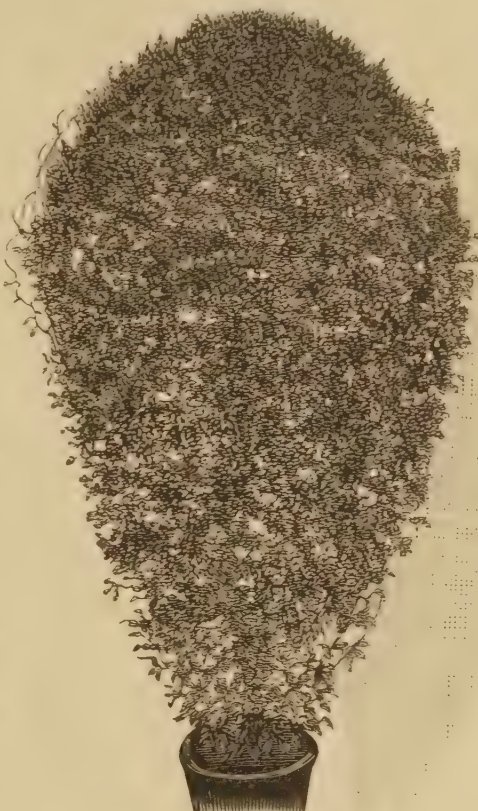
The plant has been a curiosity to my flower-loving friends, who have all admired it very much. It is a showy plant for house culture, and seems to be quite desirable, as it remains in bloom a long time.—F. J. W. B., *Springfield, Mass.*

CULTIVATING SMILAX.

The photograph from which the engraving was made was taken in January, nearly two months before the plant had reached perfection. At the present time, April 23d, it is much larger and the foliage is more dense; it is also full of bloom and very fragrant. When the photograph was taken the plant measured across the trellis thirty-two inches, and in height fifty-five inches. It now hangs in festoons of lovely green, and the new growth twines in and out upon itself, as the trellis was long since covered from view. The question is often asked, "how do you make Smilax grow so luxuriantly?" The answer, in short, is by catering to its needs, but more explicitly, as follows:

As soon as the seeds are ripe, usually about June, the earth is allowed to dry out and the foliage to die. The pot is then turned upon its side in some convenient place in the open air, out of the way, and where it will get no water. About the first of September take the bulbs from the pot and shake the earth from them. To prepare for planting, put a quart or more of broken bones in the bottom of the pot, then fill with soil of about one-half leaf-mold, one-fourth fine sand and one-fourth garden loam, pressing it down firmly with the hand, and filling not quite to the top of the pot. Select the choicest of the bulbs and place them around near the sides of the pot, then cover with earth, but not too deep. Set a trellis firmly in the center, place the pot where it will get plenty of sun, and water lightly until the plants begin to

shoot up. The water may then be increased, but it must not be watered freely until it grows freely. Many make the mistake of watering too much, causing the bulbs to rot.



SMILAX—FROM A PHOTOGRAPH.

I have had the best success in getting fine plants by planting the seed. The growth is small the first two years, but the third year amply rewards the waiting. —MRS. J. W. R., *Vinton, Iowa.*

HARDY FOLIAGE PLANTS.

For out door ornamental planting a first consideration is hardiness, and next, good form and color unfading. Two woody plants that combine these merits in an especially high degree, and which both have very distinct and attractive light colored foliage, bright and almost white, are *Euonymus radicans* variegatus, which is evergreen, and *Kerria Japonica* variegata, which, although not evergreen, exhibits graceful spray pencilled with white and green, like the leaves after they have fallen.

The *Euonymus* has the very great

merits of enduring the sun and dryness well, and of not being attacked by insects; this is the more remarkable as several species suffer much from all three. It is on this account, as well as from its habit of growth and its color, an excellent cemetery plant, especially for mantling a grave. With dark evergreen Ivy round the base, and the silvery *Euonymus* over the mound a grave looks so warmly sheltered as to supplant half the sorrow in mourners' hearts. The white of the leaves become tinged with warm pink in winter. Both these plants have the habit

of taking two or three years to get their roots established before showing much advance above ground; but once so rooted they both push with luxuriant vigor, yet are easily kept within bounds, and very easily guided in any direction. Both climb and adhere firmly to stone or brick walls, but the Ivy, above the snow line, must be out of the sunshine in March to be safe.

On a windowless brick gable here, in full sunshine, a Japan Creeper, *Ampelopsis Veitchii*, in the middle, with the pale, dwarfer *Euonymus radicans* on each side, looks fitting and handsome, and gives the owner no trouble at all of training. The native habit of both plants is perfect neatness.

The *Kerria variegata* is also an excellent low bush for cemetery planting. It is branching, but well erect, and takes care of itself as to figure. It prefers some shade, and good soil develops much beauty that otherwise does not appear. On this account it is not so safe

a plant for setting in cemeteries on high, dry, exposed ground as in a house-yard, and especially in a bed of Roses, with which it harmonizes in every way. Neither of these plants is expensive, as they are both easy of propagation.

I will mention two herbaceous plants that are equally hardy, and also beautifully painted with white and green, and equally eligible for planting on a grave. First, the variegated Day Lily, *Funkia albo marginata*, which, like the *Kerria*, prefers not to be exposed to the hottest sun, and is unexcelled by any plant in the lovely markings and the graceful Acanthus-like display of the leaves; and, second, the Star of Bethlehem, *Ornithogalum umbellatum*, also lily-like, and common in gardens, with profusion of pure white star-shaped flowers, boldly held up to sun or wind from eleven o'clock till three. It fears nothing, grows anywhere, and is always neat and tidy the summer through.—W.

HORTICULTURAL EXHIBITION.

At the spring exhibition of the Massachusetts Horticultural Society, early flowers were appropriately made the feature of this honored and pleasant festival, which took place late in March. It could be wished that societies would hold their principal shows about the tenth of the month, so that monthly journals could secure reports for the current number. However, the interest of a flower show does not die out with its Roses, for those who do not look on it merely as an advertisement. The notes of an amateur will have something for reference, comparison of favored varieties, and suggestions of experiment for years to come. Let me beg of flower lovers to acquire the habit of seeing richly, not to visit an exhibition merely as a spectacle, to be struck by its novelties, but to gather something for their own use, which is the surest way to treble the entertainment.

The standing comment on each show is that it is "the best ever held in Boston." The increasing variety of the spring flowers yearly shown proves the growing discernment in garden matters. People are quicker to seize the effects of familiar blossoms grown and grouped

with care. The flushed ranks of Azaleas and Hybrid Roses along the hall were far less absorbing than the central interest of Primroses, Violets and flowering bulbs. The perfume of the Hyacinths drew one to the superbly grown collection of C. H. HOVEY & Co. From notes for a private selection, I take *Voltaire*, a flesh-white variety, the trusses looking as if set with Tuberoses, the flowers were so large; *Blondin*, a lavender, almost an *Agapanthus* in size and color; *Lord Melville*, a fine black variety, verifying the old simile of "vernal Hyacinths in sullen hue;" *Paix de l'Europe*, with lovely drooping white clusters, a very graceful, poetic sort; *Dickens*, waxy pink, and *Ida*, the prettiest yellow one, of a Primrose tinge. Desirable among the Tulips were the *Purple Crown*, a deep plum color, with very distinct yellow star in the cup, really a striking variety; *Royal Standard*, a rich, rosy blossom, feathered in the white, one of the finest for any collection; *Proserpine*, rosy crimson, lovelier than usual, and quite off the scarlets which are so tiresome in Tulips; *Rose Ablatio*, if I made out the card right, a lovely thing, white tipped with softest rose, with finest pencilings of

crimson, and Queen Victoria, a lovely white Tulip just tipped with ruby.

The Botanic Garden, at Cambridge, always has a lesson for the quick eye in its treatment of interesting fresh varieties. A giant *Mesembryanthemum* (acinaciforme,) a small but very graceful native white Orchid, *Cypripedium candidum*, a purple *Aquilegia*, a strong plant with deep green leaves, as if reared in its own mountains, and an exquisite white *Trillium grandiflorum*, all grown in cold houses, show what may be done with our less cultivated plants. The *Trillium* especially deserves to be grown for an early house plant, and will be a grateful addition to Easter flowers. STILLMAN S. HOVEY had varieties of *Chrysanthemum*, Japanese, Chinese and Pompon, in good bloom, showing how late the *Chrysanthemum* season may be prolonged. I am glad to see something like justice done Carnations in variety. Among them were *Jacqueminot*, a shade lighter than *Crimson King*, and the fine buff *Astoria*, *Snowden* and *Peerless*, white, *Boule de Neige*, white and pink, and well grown *La Purite*, with its pure rosy scarlet, justifying its name. Mr. TIRNGIEBEL, of Needham, showed the delicacy of Carnations set off by their own fine blue-green, grassy foliage. His *Seawan*, a carmine deep to blackness, goes beyond *Crimson King* in color. There is not much to choose between a basket of choice Roses and one of the large, spicy Carnations arranged, as they should be, with plenty of their own grass to give them lightness.

"How comes the Poppy out in snow?" I said to myself, but a glance showed the *Anemone coronaria*, precisely the blood red, silky cup of the summer Poppy. Mr. GILMORE's large plants persuade me that the white *Cineraria* is, after all, the kind for house growing. E. L. BEARD's *Narcissus*, *Balba*, is fairy-like, with small hoops of gauzy primrose, gleaming fine gilt stamens and airiest grassy foliage, most exquisite of delicate things. C. M. HOVEY has a grouping of art, a dozen plants of black Pansies in pots, with edging of *Belle de Chatenay* Violets, charming for the center of a table.

How is one to speak fitly of the Orchids, when the treasures of AMES, HUNNEWELL and PRATT, wealthy amateurs of these exotics, overflowed the

stagings—baskets and cushions of flowers and swinging garlands of fragrance. Imagine yards of festoons from each basket and scores of flowers to a festoon, in shapes and colors of delicate, daring fancy. Vivid *Cattleya amethystoglossæ*, its pink freckled with ruby, and lip of crimson, making it one of the most brilliant of flowers, was neighbor to the delicate *Cœlogyne cristata*, var. *Chatsworthii*, a white and straw blossom with long, airy, golden stamens. The Urn-flower, *Urceolina*, bore pendants of egg-yellow, gold and green in light, fresh elegance, unrivaled for decoration. *Cattleya trianae*, flesh color and crimson, had a clover perfume plainly discernible above the other fragrance that filled the hall. A buff and red *Lælia harpophylla*, *Odontoglossum Rossii* in speckled pink and chocolate, *Cymbidium Lowianum* in citron with blood red lip were attractive and distinct, as was the *Lycaste Skinneri*, a great tri-petalled blossom in flesh color and rose—three to be recommended to collectors who grow Orchids for their variety, not for the name of the thing merely. A *Masdevallia towarensis* was an exquisite variety among flowers, a white blossom to which its long, pearly spurs give the airiest carving. Perhaps the Orchid of finest growth and beauty was the *Dendrobium Pierardi*, from the Botanic Garden, its long wreaths of palest, translucent flesh and citron blossoms lightly linked and tremulous at every step. The royalty of these delicately reared Orchids, their sensitive beauty and grace, which seem to spring out of air-like blossoms of flame, to glow and quiver and resolve into air again, seen in such profusion fully explained the passion for them among wealthy collectors.

Among the Roses, C. M. HOVEY's seedling, unnamed, is the largest Tea Rose out of California. J. B. MOORE has a superb new Hybrid Perpetual Rose, Col. *Felix Breton*, the darkest known, really black with darkness and intense in fragrance to correspond with its color. The taste for deep colored Roses increases, as it is seen how they set off complexions when worn, and paler Roses in groupings. A vase of *Jules Finger* and *White Baroness* artistically placed against *Felix Breton* and *Souvenir de Reine*, another new dark Rose, was a

lesson in sumptuous arrangement. The White Baroness is a Rose of supreme elegance, of the same refinement of type as the matchless Mabel Morrison. A prize of \$15 was taken by JACKSON DAWSON for a single Hybrid Perpetual Rose, Abel Carrière. Climbing Captain Christy, white with shaded rose center, is a lovely companion to the vivid Boston Belle, shown last year. The Paul Neyron, from the F. B. HAYES' greenhouses, was a phenomenon of the sort prized at English shows, a single bloom the size and color of a pink Pæony, and exactly like one. But a Pæony on a stake four feet high,

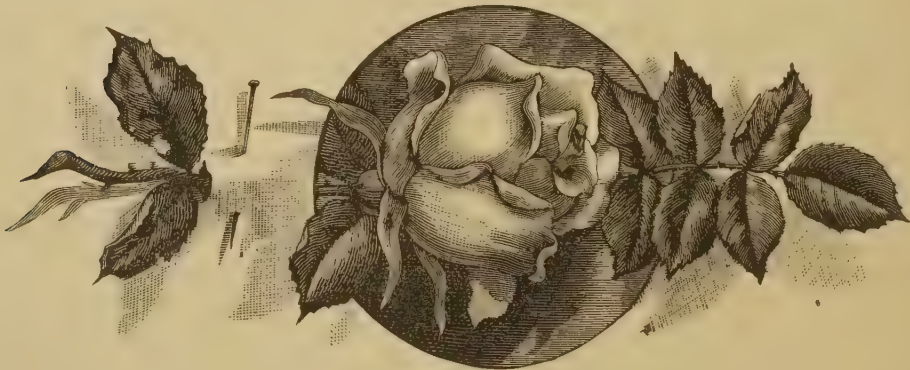
without its mat of spreading leaves, is not an agreeable sight. The overgrown Roses, like Star of Waltham, are not admired by those who grow Roses as flowers, not as vegetables. The limit of size has been reached in many favorite flowers. Some of the Cyclamens and Pansies shown were as large as any true lover of flowers would care to see them. The eye returned with delight to the fresh hues of modest Primroses, lilac, pale yellow, delicate buff and wallflower—brown, set in their shading leaves, ever bright and fair, the children of the spring. —SUSAN POWER.

THE HELIOTROPE.

The Heliotrope is a native of Peru. Its name is derived from *helios*, the sun, and *tropo*, I turn. It was introduced into France by JUSSIEU, in 1740. One day, this botanist was herborizing on the Cordilleries, when he suddenly found himself inebriated by the most delicious perfume. He looked around expecting to discover some splendid flower, but perceived nothing but some pretty clumps of a gentle green, from the bottom of which little capsules of a faded blue color were detaching themselves. He observed that the flowers turned toward the sun, and he therefore gave it the name of Heliotrope. Charmed with his acquisition, he collected some of the seeds, and sent them to the Jardin du Roi. The French ladies were charmed with it, and made of it a floral pet. They placed it in costly vases and christened it the flower of love. From thence it soon spread to other parts of the world, and has every-

where been greatly admired. One day, a very charming woman, who doted passionately on the Heliotrope, was asked what she could see in this dull and somber looking plant to justify so much admiration. "Because," she replied, "the Heliotrope's perfume is to my parterre what the soul is to beauty, refinement to love, and love to youth."

There has been a great improvement in this plant within a decade of years, the trusses are much larger and the tints more varied. We plant our Heliotropes directly in the ground as soon as the weather is sufficiently warm, and they grow and spread themselves greatly, blossoming abundantly until frost nips them. They are too large to pot, so we root cuttings from them for the house. One can do this at any time, but it is well to begin quite early if good strong plants are desired for the window garden.—MRS. M. D. WELLCOME.



FOREIGN NOTES.

TRAPPING ANTS.

The easiest and most successful way I know of destroying ants which have found a harbor amongst plants, is to place inverted flower pots where they are seen to be working, stop the holes and allow them to remain several weeks without disturbance, and when you remove them you will find them full of earth and eggs. It is, however, necessary that a copious watering be given around the pots now and then, as it is the dryness and comfort which the pots afford which attracts the ants. In the open ground, in showery weather, they soon fill up the pot, and if these are removed three or four times during the summer, taking care that eggs and insects are destroyed, there will be an end to them in the course of two seasons; generally speaking, there are few left by the autumn. The best time to lift the pots away is in the evening, watering around them in the afternoon, as that drives the ants in. I have trapped millions of ants in this way and have never known the plan to fail. A year or two ago I had some frames badly infested; I could not use hot water, as they were working amongst the roots of the plants. I put down three or four two and a half-inch pots, and by the end of summer I caught them all. Very often ants get into Box edging, and they cannot well be dislodged, but the above method will draw them all out in time.—J. C. B., in *The Garden*.

NEW FORM OF CYCLAMEN.

The engraving herewith, made after an illustration in the *Gardeners' Chronicle*, shows the peculiarities of what may be a new type of Cyclamen, if, as the above named journal states, "it can be perpetuated, as no doubt it can be by patient selection. It consists in the development from the veins of the plants of a little lace-like frill. The growths in question are of the same nature as those so common in Kales and others of the Cabbage tribe, and they are of interest as showing that leaf and branch are not essentially so dif-

ferent as they appear to be. Here we have a petal branching just as a shoot may do, and to prove the point the leaves also show a similar tendency, though to



A FRINGED CYCLAMEN.

less degree." A fringed Cyclamen would certainly be an object of rare interest to plant lovers, and we hope to hear in due time that the peculiarity has become fixed.

TUBEROUS BEGONIAS.

Tuberous-rooted Begonias are always showy and useful; a packet of seed will afford great variety, but to raise the plants requires some care. The way to be successful is to well-drain a pot or pan, and then fill it with finely sifted soil, which should be pressed down firmly and made perfectly smooth on the surface, when, after being watered and allowed to stand a short time, the seed may be sown; but as it is so exceedingly small, it must not be covered, except by a pane of glass, which is necessary to prevent evaporation and keep the soil constantly moist, as on that its germination very greatly depends, and it does not do to water except through a very

fine rose, or the seed gets washed away and lost altogether. As soon as the plants are up the glass should be tilted, and the soil kept damp by gentle syringing, which must be continued frequently, and if that is done they will soon reach a size large enough for pricking off, after which it is necessary to keep them damped or syringed as before, and standing in a house or manure bed frame, where they can get a growing heat to push them along, or they will be late before they come into bloom. A good way to bring them on quickly is to plant them out in soil laid on gently fermenting material, with a frame over them, a plan which has other advantages, as they soon show flower, and the best can then be selected for potting and the others discarded or planted out in the borders or beds, where, if the weather is favorable, they will be found to do well. Not only are Tuberous Begonias good in pots, but they make good basket plants, for which their habit just suits them, that is, those of the drooping or pendulous class, as some grow erect, and send up their flowers erect, too. The soil most suitable for the plants is loam and leaf-mold, but they do not require large pots, as they may be fed by giving a free supply of water and weak liquid manure after they have made plenty of roots.—S. D., in *The Garden*.

FORCING TREE PÆONIES.

A celebrated nurseryman and bulb raiser, E. H. KRELAGE, of Haarlem, Holland, says: "The cultivation of Tree Pæonies in pots for winter gardens, conservatories and other purposes cannot be too much recommended. If watered

well, flowering specimens of this fine class of plants may be had as fine, if not finer, in winter than is possible in the open ground. An important point is to have good established plants, which have been in pots undisturbed for at least one year before forcing them. Forcing Tree Pæonies has been a custom in Holland for a long time. My father, as long ago as 1833, obtained a silver medal, the highest award, at a flower show of the Society of Industry, held at Haarlem, February 23d, of that year. It was a splendid specimen of the old sort of Tree Pæony, with several open flowers as large and fine as they had ever been seen. The forcing of the plant at so early a period was then considered an extraordinary fact, on account of the inferior arrangement then obtainable as compared with those of the present time. Some fine Tree Pæonies in bloom were exhibited by my firm at several late shows, beginning at Amsterdam, April, 1856, and lately a dozen varieties were shown at the Grand Haarlem Exhibition."

A ROSE HEDGE.

I have lately planted a hedge which I believe to be entirely new and very promising. It is of young plants of *Rosa rugosa*. This Rose, which is quick-growing, has very close strong thorns, and if a hedge of it is carefully made at the bottom, I should doubt if even rabbits could get through it. I used seedling plants, but where the Rose thrives it makes many suckers, and it would save time to use these. This Japanese Rose flowers well, even when closely cut in, and the early foliage stands frost.—G. F. W., in *The Garden*.



PLEASANT GOSSIP.

JUNE ROSES.

A gleam of red in the garden,
A breath of balm on the breeze,
And lo! all the sweet June Roses
Are opening under the trees,
And I think, of all summer's flowers,
None are so sweet as these.

There comes to me with the fragrance
Out of the heart of the Rose,
A memory, tender with sorrow,
Of one who no sorrow knows,
Who brought to my life such sweetness
As the June gains from the Rose.

She gave me her love's rare flower;
O, never a blossom that blows
Is sweet as the heart of my darling,
That she gave me with a Rose.
Darling, the blossom has faded,
But your love no fading knows.

I bend o'er the beautiful blossoms
That nod o'er the garden wall,
And my heart is astir in my bosom,
As if it heard her call.
Where are you, oh, my darling,
Sweetest June Rose of all?

Oh, my love, like a summer blossom,
You died, as these Roses will;
Died, but the heart you gave me
I hold in my keeping still;
I shall keep it forever and ever,
Mine through all good and ill.

Blossom, oh, Roses of June-time,
Turn your red hearts to the sun,
You were born to blossom and wither
When summer seems just begun.
So died the hopes of life's summer,
Like the Roses, one by one.

But I fancy each faded blossom
Will some day blossom again,
And hopes that died with the Roses,
Like the hopes of so many men,
Will come back in the June of Heaven,
And then, oh, my darling, *then!*

—EBEN E. REXFORD.

FLOWER-BED BORDERS.

There are twelve large beds in my flower garden, and last season, three beds, four feet wide, ten feet long, the corners rounded to make them slightly oval, were in the center. Around these beds I sowed an ounce of Sweet Alyssum seed, which made a border a foot wide, completely covering the rocks around the beds. I found the white flowers extremely useful all summer when preparing baskets of flowers. All who entered my garden, seeing the borders of Alyssum, exclaimed, "How lovely! and what sweet fragrance!" It contrasted finely with the scarlet Geraniums, Phlox Drummondii, dwarf Asters, double Portulaca, and other bright flowers in

the beds. Those three beds have Tulips of many kinds now around them, and the Alyssum I sowed two weeks ago has come up thickly, so I shall have a fine display before long. There are seven boarded-in beds, sixteen feet long, and a little over a yard wide. The front one has a border of the low-growing, double, white Pinks on one side, and the rose-colored variety on the other. These Pinks are as double and as fragrant as the tall Carnations, and make a beautiful border. Another bed has a border of double Daisies, which are pretty, but without fragrance. Ageratum Little Gem I have sown for one border. The old fashioned Moss Pinks and Golden Moss make pretty edges for the ends of low beds. Crimson and white Candytuft I used for bordering last season, but nothing pleased quite as well as Sweet Alyssum and Pinks.—MRS. C. G. F., *Elliot, Maine.*

The above note bears good testimony in favor of Sweet Alyssum, Pinks, &c., for edging plants, which is quite to the point; but in another respect this note is a curiosity. In our ignorance, we supposed that there no longer existed a flower garden with its beds bordered or edged with boards, as this appears to be. Fifty years ago in this country it was quite common to board in the beds, and it seems that the practice survives after all that has been written to encourage a "more excellent way." It is time that rocks and boards for edgings should be banished from our flower gardens forever.

LAPAGERIA ROSEA FROM SEED.

Kindly tell me about growing *Lapageria rosea* from seed, and at what age they blossom, soil, &c.—S.

Lapageria seeds germinate most readily when fresh. They should be planted in a pot of leaf-mold and sand in a gentle hot-bed, or in a propagating house. Old seeds are often several months in starting. The plants are best suited with the ordinary greenhouse temperature of 60° to 65°. They are slow growers, but, if properly managed, may be brought into bloom the second year. The potting soil should consist of a large proportion of leaf-mold and sand, and be well drained, for it should be of such a nature that it will not become heavy or pasty with water, which the plant requires plenty of while growing. Shift the plants to pots of larger size as more root room is needed.

If the plants can be turned out of the pots, and be favored with a well drained spot in a light border in the greenhouse they will thrive all the more freely.

POT-PLANTS IN SUMMER.

Will you kindly give, in your MAGAZINE, the best way to treat Pelargoniums that have bloomed during the winter. I refer to F. Dorner and F. Hienl, also other plants, as Geraniums, Fuchsias, Lantanas, and others of this class that it is desirable to preserve in condition for blooming next winter. I have tried plunging in the garden bed, and found the roots grew through the bottom of the pot, and broke off when lifted in the fall; this hurt the plants, also, worms were in the pots. Last season, I plunged the pots of plants in boxes of sand, in partial shade; they grew most of the summer. I kept them from blooming, and placed them in our conservatory in September, after giving them good fresh soil, but they have not bloomed, only growing, and now, in March, just coming into bud.

Do you advise planting Calla Lilies in the garden during summer, or plunging the pot with bulb in it? Is it best to renew the soil in the pots spring and fall?—Mrs. G. C., *Sycamore, Ill.*

At this season of the year the best disposition of the greenhouse plants is to turn them out of their pots into the open ground of the garden. Here they can remain until the last of August, when they will have made a good growth and be in far more vigorous condition than if kept in the pots. It is necessary, however, to attend to them promptly at the close of summer, and not to delay the necessary attention until cool weather comes. By the end of August the plants should be lifted and potted in good soil preparatory to a blooming season in winter. It is a good practice to cut around the plants before removing them from the soil. This operation is performed with a narrow, sharp spade, and close enough to the plant to allow the soil or ball of earth attached to the roots to be placed in the pot it is to occupy, and to have a little room to spare for fresh soil around the sides. The effect of cutting around the plants is to reduce the roots, thereby causing a new growth of rootlets. If this is done about two weeks before they are to be lifted there will be a mass of young roots when the plants are taken up, and these will be ready to work actively in the fresh soil provided for them at the sides of the pots. If the plants are not cut around before removal they will take a somewhat longer time to recover from the moving. A plant that has already acquired as large a size as is desirable can be plunged in the open

ground in its pot, setting the rim of the pot below the surface of the soil. When lifted at the close of summer, it should have considerable of the soil removed, the roots shortened in, and be repotted with fresh soil.

There is no better treatment of the Calla than to turn it out of the pot and set it in the garden until the last of August, and then repot it. By treating plants in the manner described no repotting in spring is necessary.

NARCISSUS—OXALIS.

How shall I manage the Polyanthus Narcissus to make it bloom? Last year it had six blooms, and this year not one. What shall I do with it when the leaves die?

My Oxalis, winter flowering, never has bloomed at all; what is the matter with it?—E.

A Narcissus bulb that has bloomed in the house should not be employed for that purpose again the next year; it is enfeebled under pot culture, and after blooming should be turned into the open border. Strong young bulbs should be selected for winter blooming.

Without knowing how the Oxalis has been managed, we cannot say what is the matter with it. The proper course now is to plant it out in the garden until cool weather in the fall, when it can be repotted.

ROSES FOR CONSERVATORY.

We are building a double-pitch greenhouse, forty feet by twenty feet, with a Rose bed at the warmest end. What I want from you, through the MAGAZINE, is a list of twelve of the best Tea Roses for winter blooming, including a Marechal Niel, and one more climbing Rose, that you might name, to train along one side of the house with the Marechal Niel on the other.—J. S., *Wilmington, Del.*

A dozen of the best Tea Roses for the conservatory are, Bon Silene, Isabella Sprunt, Madame Bravy, Marie Van Houtte, Monsieur Furtado, Safrano, Souvenir d'un Ami, Niphetos, Perle des Jardins, Catharine Mermet, Madame Lambard and Gérard Desbois. A good climber, as a mate for Marechal Niel, is Lamarque.

MOSS ROSE NOT BLOOMING.

A Moss Rose, Comtesse de Murinais, obtained three years since, is now a large, thrifty bush, but has not bloomed. Are the Moss Roses free-bloomers?—Mrs. R. R., *Madrid, N. Y.*

The pruning of Moss Roses must not be neglected if one expects blooms; the growth of the previous year should be

cut back to five or six inches, and this must be followed up, year after year. A good surface dressing of manure should be given every fall or spring.

A COLD FERNERY.

In our climate of great extremes, the bright sunshine and high heat of summer, and the severe cold of winter, when for weeks the mercury hangs around the zero point, the difficulty of maintaining a cold-fernery in good condition is quite as great as keeping up one with a warm temperature, if we take our lessons of management from the examples of European horticulture. Fortunately, we have



A COLD-FERNERY ADJOINING A CELLAR.

other resources, and the illustration herewith is intended to show how walls may be extended out from eight to twelve feet from a cellar wall, through which there is an opening, and be covered with sash to admit light. Here will be a room which the warmth of the cellar will keep at an even temperature above freezing, and which is admirably adapted to the growth of hardy Ferns. The walls should be laid up with irregular stones in such a manner as to provide pockets for soil all over the surface. Besides these places for the plants the outer end of the pit can have a slanting bank of rock work three or four feet wide, and as much more in height, well laid up in soil, whereon a great variety of Ferns will delight to find a home. This fernery can be reached at all times without exposure to the weather, and the attention the plants require will be but slight. A glass

door at the entrance from the cellar will assist in regulating the temperature, and there should also be a ventilator in the sash. A thermometer kept hanging in the room will indicate the warmth of the air, which should range from fifty to sixty degrees in winter. A little practice will afford the skill in a short time to care for the plants to one who is interested in them.

HOUSE PLANTS ON A TABLE.

I made me a table, last year, like the one described on page 370, of volume VI, of the MAGAZINE. I wish the writer of that article could know what a comfort it has been to me. I had my plants in the windows before, and had to move them every night; then, again, I could sprinkle them on the table, as it is water tight, and they look so thrifty and healthy, and every one speaks of them who sees them, and I tell them I owe it all to VICK'S MAGAZINE. I put staples in the corners of the table, and on extremely cold nights place in them some stakes or short posts, and throw a sheet over my flowers, as our house is cold. One night it was twelve degrees below freezing, but under the sheet my flowers bid defiance to the cold. I had eighty plants on it, and only lost one small foliage plant this whole winter.—Mrs. S. M. S., *Red Wing, Minnesota.*

ESSAY ON VIOLETS AND PANSIES.

Some of our readers are asking for the publication of the prize essay on Violets and Pansies. This will be given in the August number, and will be in good time for making all necessary preparation for the care of the plants in winter. The plants intended for winter blooming should be well cultivated in the open ground of the garden during summer. Set out young plants of this spring's starting and tend them well.

ROSE BUGS.

It is said that Paris green applied to Rose bushes and Grape vines infested with Rose bugs will kill the insects as surely as it does the Potato bug, when used on Potato plants. The application can be dry, mixed with flour, or land plaster, or in liquid form, mixed with water, and sprinkled on, in the same manner as for the Potato bug.

FLORAL GOSSIP.

The Petunia of our gardens is an excellent winter bloomer in the sitting-room. It will flourish under very unfavorable circumstances. It does not seem to mind dry air, dust, or quite a low temperature in the least, but keeps on growing up and up, and putting out dozens of its fragrant, brilliant flowers. It grows well in any soil, but does best, in the house, I think, in one only moderately rich. It should have a trellis of some sort to clamber over. A good effect is produced by planting a purple and a white variety in the same pot, and training them up together. The contrast of color is very pleasing. To insure profuse blooming all the old flowers should be cut off as soon as they begin to fade. On no account let seed form if flowers are what you want. It makes a fine basket plant, as it grows and blooms well when left to droop. The best plants for winter use are young seedlings from the garden beds, where you will find plenty of them in the fall. The single varieties are the best bloomers.

Don't try to keep Carnations which bloomed in the house during the past winter for next winter's use. If you do you will be disappointed in them. Get strong, new plants, and put them out in some garden bed, and keep all the flower stems they may send up cut off close to the plant. By doing this you will have a bushy plant when fall comes, and not the scraggy thing so often seen where all the buds that appear are allowed to grow and bloom. A plant that has been properly pinched back during the summer will be compact, and have a dozen or more good branches starting from the crown, each one of which will produce flowers if proper management is given during the winter. To have the best success with Carnations, keep them in a cool window, but a sunny one, give plenty of fresh air, and shower frequently with tobacco tea to keep down green fly and red spider. When they begin to come into bloom give a weekly watering with some stimulant. Remove old flowers when they fade, and keep the easily broken stalks tied up well. Old Carnations can be set out in the garden, and will furnish quite a supply of flowers during the summer. But they are not worth taking into the house again if

young plants can be obtained. New plants from old favorites can be secured by laying down a branch which has been slightly broken, and heaping earth over the broken part. Roots will soon start along the break, and when the layered shoot or branch shows indications of growth it can be severed from the old plant. A great many persons complain that it is exceedingly difficult to make Carnation cuttings root, but I think they will find no trouble in getting new plants if they will depend on layering rather than on removing cuttings and starting them in the usual way practiced with slips.

The Coleus is a showy fellow, and its gay leaves give a bloomy look to a stand of plants on which there may not be a flower. But it is distinctively a summer plant, and is not very satisfactory for winter use, unless one can keep it in a room where summer temperature can be kept up. If this can be done, young plants can be used effectively, but in our ordinary rooms, where there is a good deal of dust, and great variation of temperature, it is almost a total failure. True, it may live, but it does so at such a "poor, dying rate" that any one who has real love for the plants he cultivates would be glad to see it out of its misery. If you must try to winter it, give it a position in the upper part of the window and keep it from all draughts. Young plants only should be used. Old ones will drop their leaves and fall apart, joint by joint, and leave you Coleus-less by February.—*.

BLACK FLIES ON ASTERS.

On page 147 VICK'S MAGAZINE, J. W. D. asks if there is anything that will kill the black fly or bug that kills the Asters as speedily as the Potato bug kills the Potato vine. About five years ago I found my Asters literally covered with this black fly. I put kerosene a few inches deep in a pail, knocked the flies into it, and then made a solution of about a tablespoonful of kerosene to an ordinary pail of water, sprinkled the Asters and the ground around them. Next day I found a dozen or twenty flies where there were hundreds, if not a thousand, before. I repeated the application, as before, my Asters flourished, and I have never seen a black fly since.—A. A. H., *Schoharie, N. Y.*

HELIOTROPE CULTURE.

In the May number, received this morning, I notice that some one has some difficulty with Heliotrope culture. I sympathize with all who fail to have Heliotropes in perfection and abundance. As I have been singularly successful with them, from the tiny seed to the mature plant, I hope I may be pardoned for coming to the front with a few hints and suggestions. In starting seeds or slips, I use a box ten inches long, six inches wide and six inches deep, with a sliding glass cover, easily admitting air when necessary. After repeated experiments as to the earth best suited to their wants, I shall unhesitatingly pronounce in favor of that taken from an old wood pile and thoroughly sifted, as it never bakes, a thing to which the Heliotrope will never submit cheerfully.

The plant likes moist heat at the roots and fibers; this is supplied by filling the saucers of the flower pots with hot water. If any lover of this delightful plant will secure "perfect drainage," and then remember that it is a very thirsty plant, he can scarcely fail in its culture.

When removing plants to the garden, which I always do in summer, I am careful to have a generous supply of the "wood pile dirt" in the cavity prepared for the reception of the Heliotrope. I had one in the garden, last summer, fully three feet high, loaded with delicious blooms, and admired by all who saw it. —NELLIE BAKER, *Mt. Morris, Ill.*

WHOLESOME NEGLECT.

I am very much interested in your MAGAZINE. The experience of lucky or unlucky gardeners offers food for contemplation. One correspondent relates her success with a Cactus; another deplores her failure in blooming a Yucca. Permit me to tell you about my Cactus, a fine red flower, like the one described in the last MAGAZINE. I bought it when it had three or four flowers on it; after the flowers had failed I got tired of the plant and gave it to a lady who was going into the country, and I suppose she did not know what to do with it, and carelessly put it out doors beside a close board fence, where the grass grew thick and tall while she was absent. After they had been away nearly all summer, one of the family returned, and quite accidentally saw

something red in the grass. On examination she found the discarded Cactus with thirty-three large, splendid flowers on it.

And now about my Yucca; last summer it had at one time six hundred and sixty flowers upon it, and the year previous five hundred. I think a little wholesome neglect is as good for flowers as anything. —DAME DURELEA, *New Bedford, Mass.*

THE CODLIN MOTH.

Prof. A. J. COOK, in a late number of the *Prairie Farmer*, undoubtedly alludes to what appeared in the May number of our MAGAZINE on this subject. He says:

"We have tried these sugar traps, made and flavored in all kinds of ways, over and over again, and have never succeeded in capturing the codlin moth, though other moths can be caught in immense numbers. Sour milk is another remedy suggested. This, like the sweet liquid, will attract many moths; but in many experiments we utterly failed to entrap a single codlin moth."

This is very explicit and very high authority, and now we hope to receive from the parties who recommended the sweet liquid and the whey traps, some of the insects caught in the manner they describe. We hope many of our fruit-growing friends will try these methods in their orchards, and will soon apprise us of the results, and this can be done in no better way than by sending us specimens of the insects caught.

BEET SUGAR IN CALIFORNIA.

The Beet sugar factory of Alvarado, California, closed its season of sugar making in April, having been engaged steadily from last August, a period of eight months. During that time this establishment made three million pounds of sugar, an amount which, the *Sugar Beet* says, is "many times more than all the sorghum factories in the United States combined." On account of the low prices of sugars the present time is not an encouraging one for the extension of sugar making. Still, if California, with its high paid labor, can profitably manufacture sugar from Beets, there is no reason why it cannot be made in the northern and eastern States, if the business is skilfully managed. In time it will probably be one of our steadiest industries.

ROSE NOTES.

From a paper on "Old and New Roses," read before the Massachusetts Horticultural Society, the following extracts are taken:

"The most popular, because the most useful, Roses, are the Remontants, whose special beauty consists in the shell form of the large petals, softly recurving in their glistening freshness of color. For decorative purposes the varieties should be the free-flowering kinds, noted for elegance *en masse*, and brilliance, in preference to those possessed of great symmetry of form. The essayist traced the development of these Roses from the time when rosarians were delighted with *Baronne Prevost* and *La Reine*, introduced in 1842 and 1843. In 1846, the *Giant of Battles* was introduced; in 1852, the *General Jacqueminot* and *Victor Verdier* appeared, and the *Prince Camille* in 1861. Each of these is now the type of a family of Roses, the most valuable being the *General Jacqueminot* family, leading members of which are *Marie Rady*, *Pierre Notting* and *Marie Baumann*, though the *Victor Verdier* family is best for forcing, good illustrations being *Eugenie Verdier*, *Etienne Levet*, *Comtesse d'Oxford* and *Captain Christy*. But there is a type recently introduced more valuable than any of the preceding, called 'Hybrid Tea,' of which *La France* was the original in 1869. Roses of this family that give promise of usefulness are the *Duke and Duchess of Connaught*, *Cheshunt Hybrid*, *Viscountess Falmouth*, *Mme. Alexandre Bernaix*, *Mme. Etienne Levet*, *Julius Finger*, *William Francis Bennett* and *Lady Mary Fitzwilliam*.

* * * * *

"The arrangement of cut Roses is a matter of taste, in regard to which there does not exist a unanimity of sentiment, else we should be wearied with a continual sameness. But there are certain fixed laws that regulate the decorative art in flowers. Too many blooms are used for single baskets and bouquets, where they are crowded together promiscuously, exhibiting a mass of petals, the form and color of each separate flower being indistinct, with little of its own foliage to render the proper effect. The more nearly Roses are shown as they naturally grow the handsomer they

are. The stiff artificial stem, without the leaf of the flower, propped up by *Smilax*, *Ferns*, and other green things than its own, is not like nature. Hand bouquets of Roses and buds are more beautiful when made of one variety with its own foliage, stems long and loosely bunched, having a small number, well chosen, of sweet odor. A collection in basket form or for parlor decoration had better lack a flower than have one too many, the object being to form a graceful, refreshing and suggestive picture, preserving an 'easy negligence mixed with art.' Show each bloom separately, reposing in its own green, and a few colors have a better effect than many. If a combination is thought to be desirable, red, white and buff form a pleasing one. The beauty of Roses is much enhanced when displayed in masses. As a rule, if there are to be many flowers, use the delicate shades; if few, the deeper tones. Large and choice Roses are always more effective when displayed in proper standards for their reception as single specimens."

AMERICAN FRUIT CULTURIST.

A new edition of this valuable work, by the veteran horticulturist, JOHN J. THOMAS, has just been issued by WM. WOOD & Co., 56 and 58 Lafayette Place, New York. Notwithstanding a large amount of new matter has been added, and the volume contains about six hundred pages, the price is kept down to two dollars. The first edition of this work appeared a year before DOWNING'S first edition of *The Fruit and Fruit Trees of America*, and it has always held a prominent place in the estimation of fruit growers. The arrangement of the work is very excellent, and its descriptions and instructions inspire the highest confidence of horticulturists. In the present (nineteenth) edition of the *American Fruit Culturist*, a general revision of the work is made throughout, and among the added portions are descriptions of the newer Strawberries, Raspberries, Peaches and Grapes; lists of these fruits once famous, but now passing out of cultivation; directions for pruning orchards; construction of fruit houses and the best modes for storing fruits; new illustrations of budding and grafting; management of Orange groves in Florida; and a thorough revision of

the descriptive list and index by the addition of all noted new sorts to the former list. We recommend it without reserve for the use of all fruit-growers.'

CARBOLIC ACID FOR RED SPIDER.

In your January number a subscriber inquires the best means of exterminating the red spider. As I have seen no answer, I give the best means I know of, as follows: Sprinkle the plants, and especially the soil in which they grow, with water in which a few drops of carbolic acid, say two or three drops of the pure crystals to a quart of water for the plants, and double the quantity, or more, for the soil in which they grow. Some care and experiment will be required to ascertain the requisite amount, as some plants will bear more than others. She speaks of the cracks of the floor being filled with the spiders at certain seasons. I should advise washing the floors, &c., with a much stronger solution as often as they make their appearance, and if she does not find relief from these ugly pests, they cannot be the same that we are sometimes seriously troubled with.—MRS. L. S. C., *Mesa Grande*.

OUR SPRING.

It is the fourteenth of May. A light veil of green is thrown over the Willows and the Elms, as the bursting buds push out the tender leaves, the Maple spray from the same cause has a reddish tinge, the buds of the Horse Chestnut have opened enough to show that they have leaves concealed within, some of the early Cherry trees have some tiny leaves, the Virginia Creeper buds show promise of green, while the buds of the Grape vine are yet almost entirely dormant. The Hyacinth and the Narcissus, and the early Tulips are in full bloom. The only flowering shrubs that have as yet dared to show their beauty are *Cornus mascula* and *Forsythia viridissima* and *F. suspensa*. The earliest of the Chinese Magnolias, *M. conspicua*, has revealed its white petals, though they have not yet opened.

We are within two weeks of the first day of summer, and vegetation is more than two weeks later than in the average season. The early spring flowers have shown themselves, *Hepatica* and *Sanguinaria*, *Erythronium* and *Trillium*,

Thalictrum dioicum, *Epigæa repens*, *Viola cucullata*, *Caltha palustris*, *Dentaria* and *Caulophyllum thalictroides*, and others, have appeared, but all have been late. A wonderful development must naturally be expected within a fortnight, and probably by the middle of June vegetation will have reached its ordinary condition for that season. But this state of things implies an immense amount of labor upon the part of the gardeners and agriculturists who are driven with work of all kinds at once. Extra effort must be made, which will call out all the physical and mental resources; each day's work thought over and planned out the day before, and prosecuted with a system will accomplish wonders. There should be no lack of good tools, good and regular meals and regular hours of rest.

VARIOUS INQUIRIES.

"We have had some difficulty with our *Verbena* plants," writes C. A., of Denver, Colorado. "The seed came very nicely, but after they were from three-fourths of an inch to an inch high they would blast and lop over and wither; we have only one left. They were sown under glass in the house." The plants probably were kept too damp and too close; very likely the soil was heavy and not well drained.

In reply to F. J. S., of Syracuse, we will say that it is customary to soak *Canna* seed in warm water for a few days before planting, in order to soften the hard shell. Another way, which, on the whole we prefer, is to cut a small hole through the hard coat with a sharp knife, or file a hole through it; by this means the moisture can enter to the seed, and the germination will be rapid.

Mrs. D. S. C., of Barrington, R. I., wishes to know "how to obtain one of those beautiful blue *Hydrangeas*." The common *Hydrangea*, *H. Hortensia*, not unfrequently changes from its usual pinkish color to a shade of blue; this change can, also, be produced artificially by the application of iron filings to the soil of the plant.

MRS. W. J. R. inquires about a small greenish *Cactus* flower, writing to know if it is the natural color. It undoubtedly is, as some species have such flowers.

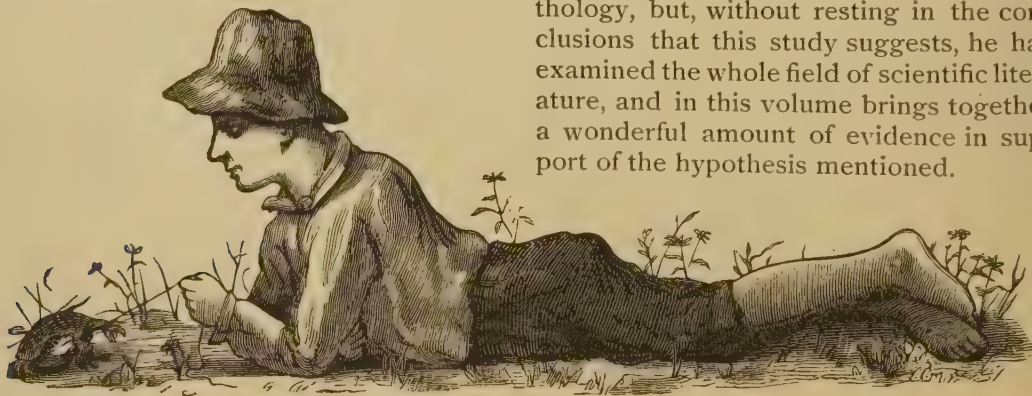
Mrs. C. M. asks what treatment the Carnation and Camellia require, and how old the Camellia must be to bloom. Carnation seed can be sown in the spring and the young plants set out in good soil and kept growing during summer. When winter arrives they should have a covering of leaves and brush, and the next summer will come into bloom. For winter blooming, young plants can be set out in rich soil, in the spring, and be well cultivated until the first of September, and then be lifted and potted, and taken inside, where in due time they will flower. The Camellia is not a plant that the ordinary cultivator can well succeed with. To raise it well it should have a house specially devoted to it, but lacking this it needs special skill in the cultivator. It thrives best in a steady and moderate temperature, from 40° to 50° in the winter season is enough for it, except during its growing season, in February, March and April, when it will be suited with 65° to 70°, but afterward the temperature should be lowered again as near as possible to 50°. Syringing the foliage and dampening the floor of the room must be resorted to to keep the proper temperature and humidity. In summer the plants can be plunged up to the rim of their pots in the soil in the open ground in a cool, shady place, but not under the drip of trees; the north side of a house, or a place similarly situated, is suitable.

J. S., of Austin, Ill., wishes to know the cost a month for heating a greenhouse twelve by fifty feet, with an ordinary brick flue, or with hot water. It is impossible to answer this question, except in a general way. The expense will vary according to the seasons, the heating apparatus, the fuel employed, and the cost of it. In this locality, such a house, if

well constructed and supplied with hot water pipes, could be kept at greenhouse temperature in ordinary winter weather by the use of two tons of anthracite coal a month, which would cost about ten dollars. A flue is better heated with wood or bituminous coal.

THE FIRST GARDEN.

The human mind has always entertained with the highest interest the descriptions, imaginary conceptions, and the speculations in regard to that locality on the surface of the earth where man first found his home, that Garden of Eden, where the first of the race lived in innocence and happiness. The Jewish Scriptures, the sacred writings of various eastern nations, the mythologies of many people, and the poets of all lands and ages have kindled to this theme. At a time when it would seem that this subject must be forever and definitely consigned to the region of the imagination, science, with its ever grasping outreach, and its growing capacity to enable us to view with clearness all objects within the range of earthly time and space, has enabled the mental vision, by converging lines of thought, to perceive at least the outlines of that garden which was the early abode of man. For several years past investigators in different departments of science have been separately led to the conclusion that both plants and animals originated within the arctic circle. The evidences of this conclusion are accumulating. A volume of five hundred pages has just been issued by HOUGHTON, MIFFLIN & Co., entitled, *Paradise Found; the Cradle of the Human Race at the North Pole*. The price is two dollars. The writer, Dr. WM. F. WARREN, President of Boston University, has been led to the subject by a study of comparative mythology, but, without resting in the conclusions that this study suggests, he has examined the whole field of scientific literature, and in this volume brings together a wonderful amount of evidence in support of the hypothesis mentioned.



OUR YOUNG PEOPLE.

AMONG THE PINES.

v.

As soon as the ice breaks up, river driving begins. Each man provides himself with a pair of river boots and a pike pole, or, in river drivers' parlance, a "pick." River boots are made with long legs and thick, heavy soles. These soles are said to be "corked" when steel nails with a sharp point are driven thickly into the soles. These caulks, or nails, penetrate the log, and prevent slipping. A pike pole is usually made of tough Ash, ten or twelve feet long, with a steel pike inserted in one end. For use where there is much lifting to do, a "peevy" is used. This is very much the same thing as the lever or handspike used in farm work, with the addition of an iron pike in the end. For rolling logs from the banks, a cant hook is used. This is like the peevy, with the addition of an iron hook shaped very much like a sickle, only, of course, much stouter. It is hung to the peevy pole by a hinge, about eighteen inches from its lower end. The end of the hook is sharp and cuts into the log when placed against it. The pike end of the peevy is placed on the log, and the hook takes hold of the log below and lifts it as the man raises on the lever. Thus heavy logs are rolled over and over much more easily than they could be by the use of an ordinary lever.

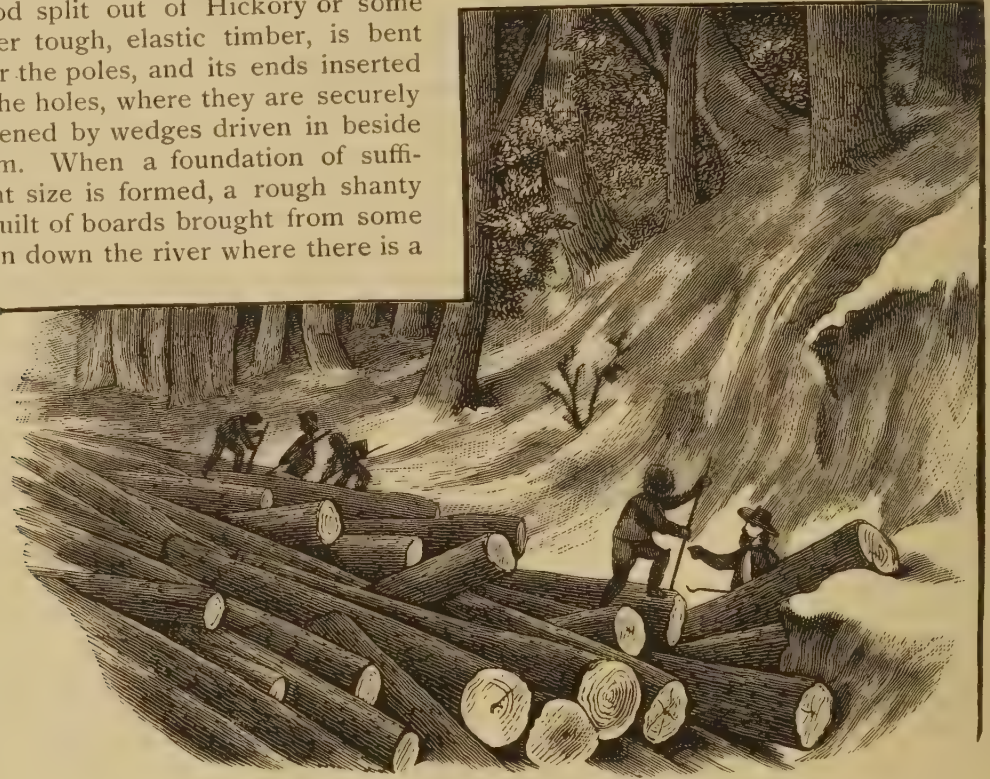
On the upper waters of many of the rivers running from the Pine country, it has been necessary to build dams in order to get a sufficient head of water to float the logs. On the upper portions of the Wisconsin, Wolf, and many other principal streams, there are several of these dams. Most of these streams are quite rough and rocky, and "driving" on them is dangerous business. Any one who sees the men at work on the logs cannot help wondering that so few accidents occur. "Breaking jam" is probably the most dangerous work a river man has to do. At places where there are large rocks in the river, or where the

channel is narrow, logs will become wedged together from shore to shore. This is a "jam." The logs from above keep floating down against the barrier, wedging them more closely together because of the pressure the accumulating mass exerts. Often a jam extends up the river for miles. You see no water, nothing but logs. It requires steady nerve and sound judgment in the men who break these jams. Often the prying out or loosening of one log unlocks the jam. The pressure of the logs above being so great, the instant the mass begins to move the men must make for the shore. Frequently men get caught in the moving logs and cannot extricate themselves, and the men on the shore can only stand and look on, for they know that it would be madness to attempt to go to their rescue.

As the logs are on the move, it naturally follows that there can be no permanent stopping place for the commissary department of the "drive." The cook goes in advance of the drive to-day, and his assistants put up tents for his use and the use of the men at night. Here he prepares food which is carried to the men at work above. Breakfast and supper are the only meals eaten at the tent. Forenoon and afternoon "lunch," for when river driving begins four meals a day are demanded, must be delivered at the places where the men are at work, for they cannot spend time to tramp up or down river several times a day. The cook remains in one place until the drive has passed him and is two or three miles below. Then he packs up and goes on in advance of the drive again. This is the way in which the men are supplied with food on the upper waters of rough and rocky streams. As soon as smooth water is reached a wamma-kin is built. Wamma-kin is the Indian name for a floating house. A foundation is made for it by fastening a number of logs together, side by side. This is done by

laying poles across them. Holes are bored in the logs on each side of the poles and a "lock-down," a piece of wood split out of Hickory or some other tough, elastic timber, is bent over the poles, and its ends inserted in the holes, where they are securely fastened by wedges driven in beside them. When a foundation of sufficient size is formed, a rough shanty is built of boards brought from some town down the river where there is a

carrying of food than when driving on rough water, where these wamma-kins could not be used. Cookee blows a



BREAKING JAM.

saw-mill. In this bunks are constructed for the men, who, until smooth water is reached, are compelled to sleep in tents. The cook has charge of the wamma-kin, and his assistants generally guide it down the stream. This is done by the use of pike poles and a rudder, which is a long oar at the rear of the raft. These wamma-kins follow the rear of the drive down the river. As many of the men are at work on the river near it, there is less

horn at ten and two o'clock, and the tired, hungry men come straggling in to lunch, which is really a substantial meal. To those who cannot come to the wamma-kin to eat, food is sent. The boys work until dark, and often till well into the night in cases of emergency. They come in with wet feet and clothes, eat something, smoke a pipe of tobacco, and go to bed, to get up on the morrow and repeat the experiences of to-day.—E. E. REXFORD.

STELLA RAY'S JOURNAL.

May 1. O, the birds, the birds! how they gladden the earth and palpitate the air with life. A glance at my calendar proves that Browning must have studied them, for he says, in "Home Thoughts from Abroad:"

"That's the wise thrush; he sings each song twice over

Lest you should think he never could recapture
The first fine careless rapture!"

And the children, too, he remembers:

"All will be gay when noontide wakes anew
The buttercups, the little children's dower."

The Dandelions are first in the affection

of American children, the Buttercups next. Effie has already been asking about the latter, in the dread of losing the Dandelions all too soon.

For several mornings I have taken my pupils out under the sky, quite away from the house, for our lessons. It would take many pages to record our talks, for the questions are legion; and besides, my journal is to be a part of myself, and I have other interests as well. But I must note down, for I don't know what is coming of it, that the neighbors' children, being much out at play, have dis-

covered us, and teased and cried to go along, until there are now quite a number on the watch each day, lest we go off without them. I don't know whether I am the more annoyed or amused with the little witches.

2. I forgot to mention that yesterday Mary Roland told me that she was exceedingly anxious about the continued illness of her brother. She thinks that because there is a little spirits of one kind or other mixed with each dose of "glycerine compound," papa calls it, that it indicates prostration, and what worries her is, that Cyrus doesn't keep enough of it down to act as a stimulus, and that now he can't bear the odor of even the finest wine or brandy. The very clink of the spoon in the glass, she says, nauseates him. If it has come to that, I've no doubt he will soon be improving, probably is already, for papa and his mother certainly know what they are about.

5. Papa is rejoicing over the thriving condition of his "White Prentiss" Grapevine, which he had supposed would be winter killed, while I am mourning over the loss of my Clematis Henryi. It had glorious white blossoms, last summer, its first season in my possession, and whoever spied them, looked again. The ground was made so rich that I am afraid the vine died of surfeit.

8. Yesterday, came Will's photograph and a letter. The former I opened less eagerly than before. I shall not soon forget the disgust of that disappointment. But O, his face is just splendid. He writes that when the spring weather thawed out the earth, it thawed out the spirits of the boys, too, and they indulged in an outbreak of mischief, which only meant fun, and got into trouble, and that he himself came near being suspended. [O, Will, for shame!] "Then my 'table-mate,' " he says, "had the presumption to give me a private talking about it, at which I was very indignant until I saw her great, dark eyes moist with tears, and that wilted me. I destroyed one letter because I had written about this, but find I must tell it after all. 'Open confession,' you know, but only to you this time; keep 'mum' to the others, please."

And so I will, since that girl has taken him in hand in such fashion I may trust him to her for the present. It will not be long now until vacation.

10. Something in the sermon, to-day, reminded me of Will's "table-mate." I recalled having resolved not to let Will know that I even remembered her existence by so much as asking her name, though I shall do so now, and also of having written something spiteful of her in this journal. I dare not look back to see what it was, lest I feel still more uncomfortable than I do now. Brother Will has no idea how much courage it must have taken for that girl to talk to him. I wish there were more girls like her, more who realize the responsibility of their influence.

12. After looking over the above, just now, I thought to myself, "And whom, or what, are *you*, Miss Ray, that you should talk so wisely about responsibility, influence, and courage, too, forsooth, and yet are too great a coward to face the motto on your calendar! You had better spare your journal and go to bed." And so I will. I wish that when I was a baby Mehitable Cutter had minded her own business!

20. Yes, this is the twentieth. But I haven't been in bed ever since the twelfth. I got up the next morning, as usual, but I had cried myself to sleep, because I am such a failure in every way, and so had the headache. I was glad to hear the rain pouring down, and after breakfast, for which I had no appetite, I told Harvey and Effie that I would be pupil and they might teach me. So they had a jolly time, especially when they had to scold and punish me for inattention, which was most of the time. After a while I asked them to let me play sick. With this they were delighted, and soon had me on the bed, under the care of Dr. Harvey and nurse Effie. It so turned out that I was not up again for four days. Meantime, the young M. D. and nurse begged me to quit playing sick and play well again, declaring they'd never let me play sick any more.

When I got better, I told mamma how discouraged I had felt about myself, and she said my depression was because I was already sick and did not realize it. This comforted me somewhat, but I was not satisfied.

On Sunday, the seventeenth, Mr. Sheldon, our rector, called after church service, having heard I was ill. It was the second day of my being up, so I assured

him that I was quite well again. He looked at me a little curiously, and then, as if reading the unrest in my face, began talking of the rejuvenated earth and of the hopeful outlook on life, its many interests and activities, until finally, quite forgetting myself, I exclaimed:

"Yes, I know it, and yet I am a perfect nonentity as regards anything I can do!" He looked greatly surprised for a moment, and then gently remarked that I seemed to have full possession of my mental faculties, and that he had not been aware that I was physically disabled in any way.

At that I fired up, and declared myself perfectly sound in health. Then, in the gentlest of tones, he remarked:

"You cannot be a nonentity while still a member of your home-circle, and shaping your life, as I am sure you do, in conformity with the parental judgment. This condition *frees you of any grave responsibility*, while the duties and interests involved render you an important element in your father's household." Then I wondered if he knew I was teaching the children, and if he thought that "important."

24. This is Sunday again, and I am now really quite well. Visitors to the family broke in upon my record of Mr. Sheldon's visit. I must finish it. He went on to say that he had a niece of whom I reminded him, and that on a calendar he had furnished her was a motto, which she writes has been a great help by stimulating her higher nature into fuller growth.

"I know that motto," I said, excitedly, "I, too, have it on a calendar, and have turned it to the wall long ago. It means *so much*, that five minutes' contemplation of it crushes all the heart out of me. Papa never made a greater mistake than when he thought that solemn sentence would be good for me to study by the year."

"Probably he knows nothing about it," said Mr. Sheldon, seeming a good deal stirred, "and let me suggest that you are making too serious a matter out of the motto. There is 'development of the soul' with every worthy thought and *unselfish deed*; and this in ourselves influences those around us toward the same end, whether we will or no."

But I was too nervous and excited to comprehend him then as I do now, and

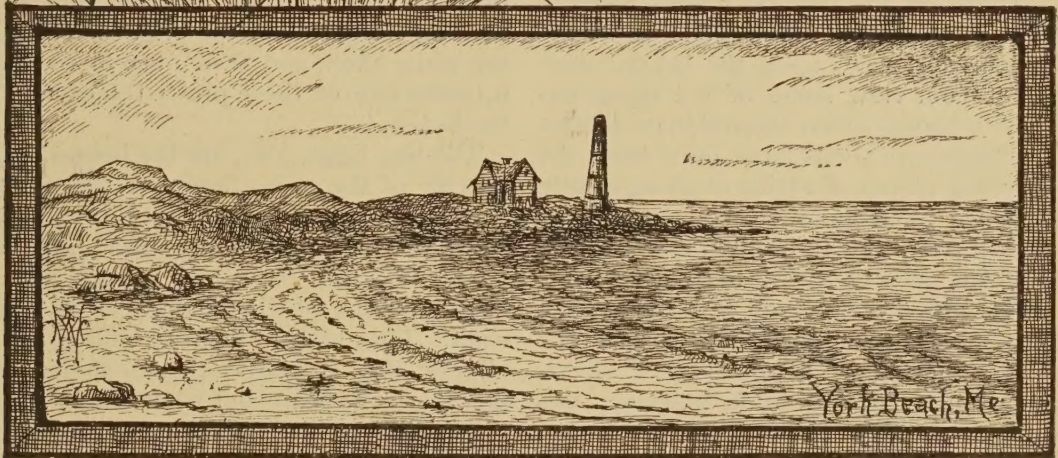
interrupted, with quavering voice: "O, but you do not understand. The little good I do is done because my parents wish it and not because my heart is in it, and so I am in a state of rebellion. And besides, you don't know about *Mehitable*," and then I burst into tears.

Fortunately, mamma returned just then, with a book she had been looking up for him, and with thanks and bows, he left, while Effie whispered to mamma that I had cried about *Mehitable* right before the preacher. She gave me an anxious, most tender look, and then papa came in and pronounced me feverish, and not yet strong enough to be up all day. And soon I was in bed again, and how good it felt, and how nice to be soothed and petted and made much of, whether one deserve it or not.

27. This afternoon I took my knitting, the shoulder-shawl, and went to see Miss Haven. She was in a chatty mood, and entertained me on a variety of subjects, from recollections of English life and gardens, to her Summer Savory beds in "Hameriky." She told also of large gateways to English estates, the posts of which were solid whalebone, from the jaws of the whale. And she talked of her cookery, and said that "Richard likes West India Currants in his soda biscuit, and don't want them too far asunder." Her house plants have been pruned, and were already fresh in new drapery. As usual, the atmosphere of her rooms seemed aromatic with extreme cleanliness.

29. To-day, as I was about to enter the back door of the office, I heard Sambo's voice, and listened. He was giving Cyrus Roland a lecture, and I was too astonished to interrupt him, wondering, with each sentence, what would come next. He was saying:

"I tol' yo' the doctah'd be yeah in no time now; an' I jes' want to say, 'tween yo' an' me, Cyrus Roland, that yo' come mighty neah goin' to never-come-back t'other night. An' if we hadn't fotched yo' aroun', whah d'ye s'pose yo'd a-foun' yo'se'? Not in heaving, suah. Chaps in that fix, when they draps off, don't sail straight into Aberham's buzzum. No, sah! W'y, all that night yo' was a-danglin' right over t'other place, jes' a-hangin' by yo' eye winkahs, an' knowed no moah about it that that jah rheuba'b. Ef Doc-



tah Ray hadn't been handy nobody on this yea'th could 'a' fotched yo' aroun'!"

"Well, now, shut up!" said Cyrus. "I've listened to your 'preach' because you had a hand in the matter, and didn't 'blow' on me to everybody. And mind, you'll never get another chance at me. I've quit acting the fool. I'll call again when the doctor is in."

30. I went home with Mary Roland from the Medley Club, this afternoon, and there sat Mr. Sheldon. I have felt, since Sunday's talk, that he must think me not only very wicked, but a perfect simpleton, and had resolved to strictly avoid him hereafter. So I bowed merely, in some confusion, and quickly passed through the

room. I do wish he were an elderly man with a lot of fussy daughters; then, perhaps he'd understand my foolishness better. However, he's not young, and is so grave, that if age were guaged by gravity, he might be a thousand years old.

31. It is almost midnight. Papa has ordered me to bed, but I cannot sleep. Grandpa Starr has been very sick and unconscious all day, and is still no better. Uncle George has been telegraphed for, so I know his condition must be serious. Mamma insists upon connecting his illnesses with his locked wardrobe. The key cannot be found, so papa has promised to have the door opened in the morning.

SAND DOLLARS AND SEA EGGS.

These are the familiar names given to species of the beautiful shells which the ocean's surf casts upon the beach, offering to our view some of the many exquisite homes which abound in its depths, for these very shells have once been the dwelling places of a tribe of strange little animals. The Sand Dollar might truly delude one into the belief that a silver dollar is lying upon the hard, wet beach, when a few yards from it, for when the sun shines upon its wet, flat surface the circle looks as if it were indeed silver; on coming nearer to it, however, this thought is soon dispelled, and the supposed silver dollar is at once seen to be the curious little Sand Dollar of the sea. It is a circle, flat on one side, very slightly rounded on the other, and on the raised surface is a perfect star wrought in the chalky substance, as if it were beautiful lace work.

On the opposite side are five lines diverging from the center, the lines slightly depressed, and from the points of these still others are branching away. The entire surface between these veins, or lines, is covered with minute circles, and in the middle of the shell is a small, round aperture. Another name for these shells, or rather the animals which inhabit them, is *Spatangus*, and when the horny creature is in its home one would scarcely recognize the Sand Dollar, for it is covered with what are called spines, or bristles, of a dark brown, green, or deep red shade, and these spines can be moved at the wish of their wearer. When

the fish dies the sea, by its constant washing, wears away the bristles, leaving the white shell, and then once in a while it tosses one of these pretty things upon the beach.

The Sea Eggs, also, are the homes of a species of the same family of creatures, and are, perhaps, more beautiful than the Sand Dollar. The name, Sea Egg, is given because they are round, white balls, and the shells are frail as an egg shell. They look like mossy balls originally, for they are covered with spines, as the Sea Dollars are, but when the bristles are washed off a snow white, lace-like ball is seen, the carving composed, as it were, of alternate rows of minute holes, and slightly raised circles. It is more difficult to find perfect Sea Eggs than Sand Dollars, for the shells are so frail that they are often crushed by being dashed against the rocks.

Both of these shells, and the creatures which dwell in them, are of the family called *Echinodermata*, which name indicates a bristled outside surface. In some the spines are so strong that they are used for locomotion, and the strange little creatures can, by means of them, travel about on the dry sand, while others, still, can thus bury themselves beneath it. Place these shells under a microscope, or powerful lens, and their true beauty will then be seen, and though there are many others of far more exquisite tint and form, these cannot fail to impress one with wonder and admiration.

—M. E. WHITEMORE.